

MINNESOTA PLANT PRESS

VOL 7 NUMBER 1 NEWSLETTER OF THE MINNESOTA NATIVE PLANT SOCIETY 1987

SHOWY ORCHIS (Galearis spectabilis — a.k.a. Orchis spectabilis)

Orchids always seem to attract attention — perhaps it's their beauty, or their means of pollination, or their sudden appearance in the woods, prairies, or roadsides. Whatever the reason, we are drawn to them. In Minnesota, we are blessed with 28 species of orchids, seven of which are on the rare plant list.

One of the relatively more common species is "Showy Orchis" or Galearis spectabilis (previously called Orchis spectabilis). This spurred orchid has two somewhat elliptic leaves, 8–15 cm long, borne near the base of the plant. The flowers have a small pinkish hood formed by the sepals and two petals; the lip (third petal) is white with a spur nearly as long as the lip itself. Found in rich mesic woods, Showy Orchis is common from New Brunswick to Minnesota, south to Arkansas and Georgia. Its distribution in Minnesota follows the hardwood forest belt from Lincoln and Fillmore counties to Otter Tail County. Look for it next spring or early summer.

Anita Cholewa



A second location for the Showy Orchis has been found in Otter Tail County. An earlier collection from the Clitherall Lake (May 1984) established a new county record and extended the known Minnesota range of this orchid northward from southwestern Douglas County. The most recent location, Maplewood State Park, is in northwestern Otter Tail County, about 30 miles north-northwest of the Clitherall Lake site.

Charles Argue

MNPS FALL AGENDA*

7 October — Ron Bowen, Prairie Restoration Inc.
Seed Exchange

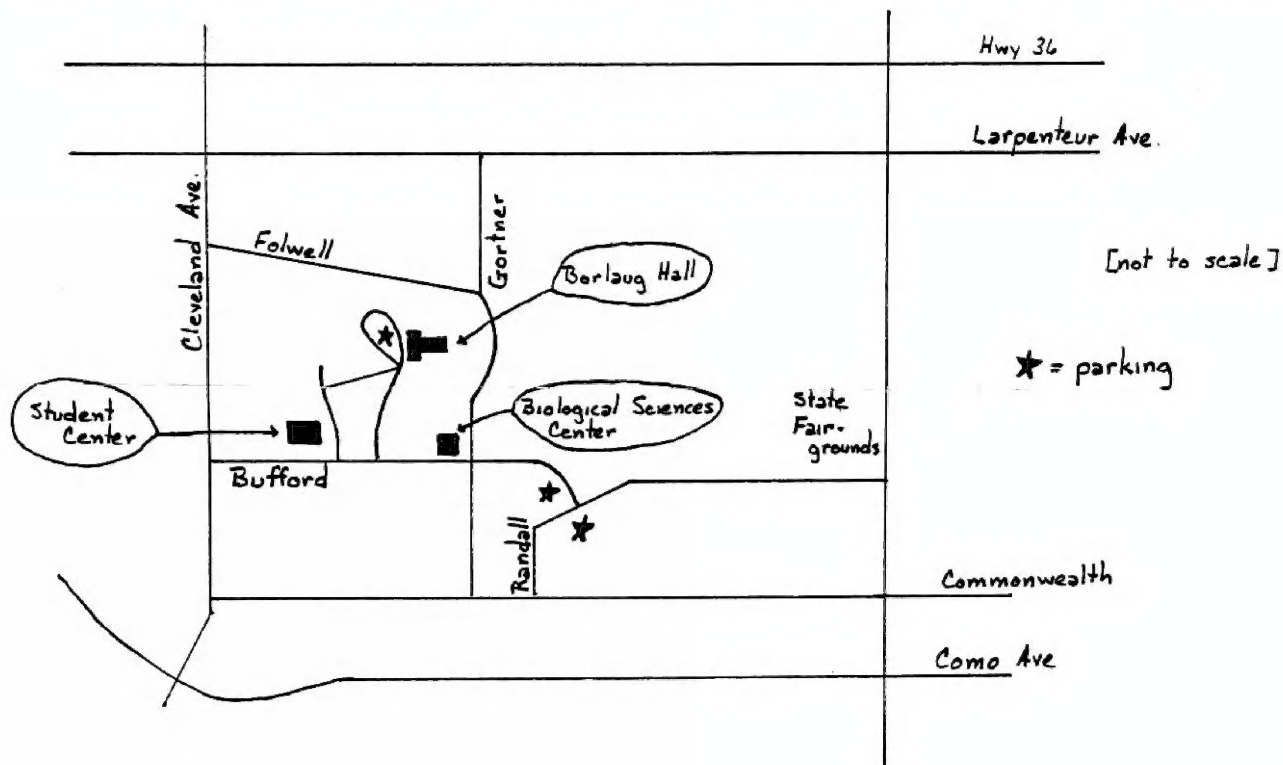
4 November — Minnesota Botany; International Exhibition of Photography

2 December — Clifford Wetmore, University of Minnesota; Lichens of Minnesota

*All meetings start at 7:30 p.m., 335 Borlaug Hall - University of Minnesota, St. Paul Campus

MNPS BOARD MEETINGS

MNPS members are invited to attend monthly board meetings. Board meetings are held the first Wednesday of each month at 6:00 p.m. (preceeding the general meeting) at the Saint Paul Student Center Cafeteria. This fall the meetings are October 7, November 4 and December 2.



OCTOBER SEED EXCHANGE

The annual native seed exchange will be held at the end of the October 7 meeting, which begins at 7:30 p.m. in room 335 Borlaug Hall - Saint Paul Campus (note: this is a room change from last year). Seeds will be available to all those attending the meeting; seed contributors are given first selection.

Please collect only seeds that are free of pests and disease. Take only a small percentage of mature seed if the plant is from the wild. Label envelopes with scientific and common names, collection site, habitat, date of collection, and your name.

Seed envelopes can be obtained by calling Dr. May Wright, 429-7674. They will also be available 15 minutes before the meeting begins. Seeds can also be sent to Dr. Wright at 4157 Bellaire, White Bear Lake, Minnesota 55110, by September 30 for packing.

Many of our members have experience in growing native plants from seeds, and can discuss what methods have worked best for certain species.

Please come to share your seeds and knowledge!

THANKS TO YOU!

Thank you to all who donated plants for the 1987 spring plant sale at our May 6 meeting. And thanks to our generous plant-buyers; a total of \$195 was raised for the lawsuit fund. Every plant found a new home.

1987 MINNESOTA BOTANY EXHIBITION

Time once again for the annual "International Exhibition of Photography: Minnesota Botany," sponsored jointly by MNPS and Minnesota Nature Photography Club and approved and listed by the Photographic Society of America.

Subject matter is restricted to BOTANY and its many facets: flowering plants, non-flowering plants (fungi, lichens, mosses, ferns), habitats, and fossil plant life. The photography should be done in such a fashion that a well-informed person will be able to identify the subject material and to certify to its honest presentation. Human elements, if present, should be unobtrusive and enhance the nature story. Photographs which depict artificially produced hybrid or horticultural varieties of plants may not be used. Photographs depicting still life studies, obviously set flower arrangements, mounted specimens, museum habitats or groups, derivations or any form of photographic manipulation that alters truth of the photographic statement are ineligible and should not be submitted (Exception: detailed micro or macrophotography). Entries restricted to 2 x 2 slides. ALL SLIDES MUST BE SPOTTED IN THE LOWER LEFT-HAND CORNER AS VIEWED FROM AN UPRIGHT POSITION AND MUST BEAR THE NAME AND ADDRESS OF THE MAKER. DESCRIPTIVE TITLES ARE RECOMMENDED. ENTRY BLANKS ON NEXT PAGE.

This exhibit will follow the recommended procedures of PSA and is open to everyone, everywhere. All possible care will be taken to protect slides, however, responsibility cannot be assumed for lost or damaged entries. Entries without proper fee will not be returned or forwarded. All Acceptances will be eligible for listing in PSA's "Who's Who" and will count toward "Star Ratings".

18 medals to be awarded this year for: PSA Best of Show; Best slide by an exhibitor outside USA; Best Non-flowering plant; Best terrestrial orchid; 3 medals to the Best slide of 3 Minnesota residents; 11 medals - open category.

Calendar:

Closing deadline for receipt	3 October 1987
Judging	10 October 1987
Report cards filed	14 October 1987
Total rejects	20 October 1987
Slides returned to owners	19 November 1987
Catalogues mailed	28 November 1987

Showings:

7:30 p.m. 4 November, Borlaug hall, University of Minnesota, Saint Paul
7:30 p.m. 9 November, Central Community Center, St. Louis Park

For more information, contact Laurence Quinn

L. Quinn

JOIN PSA !

THE PHOTOGRAPHIC SOCIETY OF AMERICA
2005 Walnut St.
Philadelphia, PA. 19103 USA

1987
ENTRY FORM
MINNESOTA
BOTANY
N.P.S.
Entry No.

OVERSEAS ENTRANTS: Underline family Name
Familiennamen unterstreichen. Prenom et nom. Souligner le nom.

Name _____ Honors _____

Street _____

City _____ State _____ Country/Zip _____ Star Rating _____

	TITLE	Please print or type	Score	Award
1				
2				
3				
4				

Ck _____

RC _____

C _____

Entry forwarded from _____ Forward to (enclose label)

ENTRY FEE: 4 Slides \$3.00 Make checks payable to MINNESOTA BOTANY EXHIBITION

MINNESOTA BOTANY EXHIBITION

BECKY HEINZ, Slide Processing Chairman

4612 34th Ave. South

MINNEAPOLIS, MINN. 55406 USA

Photographs for Exhibition to be returned to
sender

NO COMMERCIAL VALUE

FIRST CLASS MAIL

MINNESOTA BOTANY
Lawrence Quinn, CHMN
4649 33rd Ave. S.
Minneapolis, MN
55406 USA

Photographs from Exhibition being returned to
sender.

NO COMMERCIAL VALUE

REPORT CARD

MINNESOTA BOTANY
Lawrence Quinn, CHMN
4649 33rd Ave. S.
Minneapolis, MN
55406 USA

CATALOGUE

PRINTED MATTER

NEXT ENTRY FORM

MINNESOTA BOTANY
Lawrence Quinn, CHMN
4649 33rd Ave. S.
Minneapolis, MN
55406 USA

U of M HERBARIUM NEWS

New Director Appointed -- As part of its "Commitment to Focus," the Department of Botany is reevaluating and rebuilding its program in systematic botany. A new faculty member, Dr. John Doebley, has arrived and will be assuming the additional responsibilities of the newly created position of Director of the Herbarium. Dr. Doebley received his training from Hugh Iltis of the University of Wisconsin Herbarium and most recently was on the faculty at Texas A & M. Recent research interests involve genetic and evolutionary aspects of corn and its relative, teosinte. Dr. Doebley has spent much time in Mexico for research purposes, but is not stranger to the Upper Midwest. We welcome John and hope his stay here is long and profitable.

Open House -- The 2nd Annual Herbarium Open House will be held on Tuesday, October 13, 1987, from 3:00 - 6:00 in the afternoon at the Herbarium (8th floor, Biological Sciences Center, Saint Paul campus - parking available at the fairground lot). This will be a chance to meet the new Director of the Herbarium, Dr. John Doebley, and to socialize with other members of the University and botanical communities. Refreshments will be served. Mark your calendars!

Volunteer Program -- Have some extra time? Want to spend it in a botanically oriented way? Consider spending 2-3 hours a week preparing herbarium specimens or assisting in other day-to-day workings of an herbarium. Call Anita at 624-0215 for more information or to volunteer.

Anita Cholewa

NEWS FROM PARAGUAY

I recently received a letter from MNPS member Kriste Erickson. She is now a botanist with the Peace Corps, working with the National Biological Inventory of Natural History). Kriste is very enthusiastic about the project and is planning collecting trips along the Rio Paraguay and into the large wetland areas of southwestern Paraguay. She sounds happy with her new position (who can blame her?).

Kriste also has a request for help. It seems that the Biological Inventory is on a very tight budget and is having trouble obtaining money for equipment and subscriptions to scientific journals. She was hoping that MNPS members might be willing to make tax deductible donations to this scientific endeavor. Donors would receive the newsletter "Biological Inventory News" (in English), as well as a standing invitation to join field trips next time you find yourself in Paraguay. It is certainly a good cause and I encourage anyone interested to contact Kriste at the following address:

Kriste Erickson
Inventario Biológico Nacional
c/o Centro de Datos
c.c. 3303
Asuncion, Paraguay (S. Am.)

Welby Smith

WINTER TRIPS

Summer is almost over and people are already talking about the upcoming supposedly severe winter. Sounds like the winter blues are starting to bite. Try a botanical getaway ...

Western Australia --

Botanist-accompanied coach tours operate from Perth to the Kalbarri area from mid-August through late September and to the South and South-West of Western Australia from late September through October.

Visitors with a pioneering spirit can hire cars or 4WD vehicles and visit the major wildflower areas - and areas not normally visited on coach tours - at their own pace.

From September 1 to October 31 a number of coach companies offer full-day wildflower tours from Perth and during this period free guided walks are available in Kings

Park (Perth) where a native plant display and wildflower exhibition is held annually over the last weekend in September.

Western Australian Tourism Commission
Suite 1210, 2121 Avenue of the Stars
Los Angeles, California 90067
213-557-1987

Israel --

Israel Nature Trails, the touring department of the Society for the Protection of Nature in Israel (SPNI), invites you to explore Israel in a special way. Although Israel is a small country, it contains an unusual variety of wildlife, spectacular landscapes and historical sites. Our tours leave the main roads, and penetrate into little-known and relatively inaccessible areas. Our experienced guides explain the natural and human culture of these regions and point out hidden places of great beauty and fascination.

18 different tours are offered through March 1988. Some of the places visited include: Golan Canyons, Massada & the Dead Sea, En Gedi Nature Preserve, and the Negev Desert.

Israel Nature Trails
SPNI
13 Heleni Hamalka Str.
P.O.B. 930
Jerusalem 91008 Isreal

MEMBERSHIP DUES FOR 1987/1988

Time once again to renew your membership in MNPS and insure uninterrupted delivery of the newsletter, "MINNESOTA PLANT PRESS".

Minnesota Native Plant Society Membership Registration

Mail to: Minnesota Native Plant Society, 220 Biological Sciences Center, University of Minnesota, Saint Paul, Minnesota 55108

_____ New Member

_____ Renewal

Membership Categories:

\$ 8.00	_____ Individual	\$ 6.00	_____ Senior (over 62 or retired)
\$10.00	_____ Family (Two or more related)	\$15.00	_____ Institution
\$ 6.00	_____ Student (Full-time)	\$25.00	_____ Donor

Name _____ Address _____

City _____ State _____ Zip _____ Phone _____

U. OF M. CAMPUS ADDRESS _____

CALENDAR OF EVENTS

- September 29 & Lichen Biology and Ecology
October 6 U. of M. Extension Informal Courses
Tuesdays 7:00 - 9:00 p.m.
Registration deadline September 22
625-3333 for information
- October 1 - 29 Field Ecology of Minnesota
U. of M. Extension Informal Course
Tuesdays 7:00 - 9:00 p.m.
Registration deadline September 24
625-333 for information
- October 2 & 3 Reading Natural History Objects: Workshop for Professional Naturalists
and Secondary Teachers
Friday and Saturday 9:00 a.m. - 5:00 p.m.
Bell Museum of Natural History
Members \$35; Non-members \$40.00
624-3898 for information
- October 8 Backyard Wildlife Management
U. of M. Extension Informal Course
Thursday 7:00- 9:00 p.m.
Registration deadline October 1
625-3333 for information
- October 13 University of Minnesota Herbarium Open House
3:00 - 6:00 p.m.
8th Floor
Biological Sciences Center
Saint Paul Campus
- November 4 Forest Fragmentation: A Bird's Eye View
Illustrated lecture by James Lynch Smithsonian Institute
Chesapeake Bay Center for Environmental Studies
Wednesday, 7:30 p.m.
Bell Museum of Natural History
Tickets \$3.00
- November 6 The Fate of the Rainforest and the Future of Zoos
Illustrated Lecture by Michael Robinson, Director, National Zoological
Park, Smithsonian Institute
Friday 7:30 p.m.
Tickets \$3.00
- November 7 Photographing Nature: A Seminar
Kjell Sandved
Saturday 10:00 a.m. - 1:00 p.m.
Bell Museum of Natural History
624-3898 for information
Tickets \$20.00
- November 7 Beyond the Ocean, Beneath a Leaf
Film, live narration
Saturday 3:00 p.m.
Bell Museum of Natural History
Tickets \$3.00
- November 27- Wild Rice-ing: Past and Present
29 Friday - Sunday, 1:00 - 5:00 p.m. each day
Bell Museum of Natural History
Free with admission

MNPS DIRECTORY

Board of Directors

Harriet Mason, President
Welby Smith, Vice President
Ruth Phipps, Treasurer
Jim Schuster, Secretary
Neil Anderson, Director-at-large
Steve Eggers, Director-at-large
Dave McLaughlin, Director-at-large
Christine Soutter, Director-at-large
May Wright, Director-at-large

Newsletter Staff

Anita Cholewa
Debbie Olmstead

If you have a news item, article, or other information that should be included in the next issue of the Minnesota Plant Press, please send it to Anita or Roberta, Department of Botany, University of Minnesota, Saint Paul, Minnesota 55108.

Minnesota Plant Press may be obtained through membership in the Society: \$8 individual, \$10 family, \$6 student.

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220 Biological Sciences Center
University of Minnesota
Saint Paul, Minnesota 55108



MINNESOTA PLANT PRESS

Vol. 7:2 NEWSLETTER OF THE MINNESOTA NATIVE PLANT SOCIETY Winter 87/88

SCARLET GLOBE MALLOW IN MINNESOTA

In an earlier newsletter (Vol. 6, winter 86/87) I reported the first record for MN of scarlet globe mallow (*Sphaeralcea coccinea*); found by John Schladweiler at Salt Lake WMA in Lac Qui Parle County. Globe mallow (a member of the Malvaceae or hibiscus family) is a native of the prairies and plains of the western U.S., and had not been found this far east before.

This past spring, John and I returned to the site to do a more thorough survey; we found several plants along the north rim of the lake. It was a cold rainy day and the globe mallow was not in flower yet, so John decided to return a month later. That is the extent of the good news. The bad news is that when John returned to the site, all the plants were dead. They had apparently been sprayed with herbicide accidentally during routine weed control activities.

We were, needless to say, very upset about it, but John and I must accept most of the blame. We had not notified the Area Manager when we first found the plants. I am sure he would have avoided the area if we had. In spite of the loss, I think there is still hope for the plants; it is possible that there are some seeds left in the soil, or maybe some of the plants will resprout from the roots. Only time will tell.

The lesson to be learned? Everyone needs to be involved in plant conservation. That means education is important; knowledge must be shared!



-- Welby Smith

UPCOMING MNPS MEETINGS

All meetings start at 7:30 pm on the 1st Wednesday of the month, in 335 Borlaug Hall on the St. Paul campus of the U of M.

- 6 Jan -- Voyageurs National Park: the boreal forest - Nancy Albrecht (M.S. botany; Park Naturalist; currently with MINN. DOT) - Voyageurs is the only N.P. in the Lower 48 with extensive boreal forest. Past use of the area presents challenges in resource management today.
- 3 Feb -- Mushrooms of Minnesota - Dr. David McLaughlin (Dept. of Botany) - Preliminary results of a recently established survey of the fleshy fungi, with emphasis on Cedar Creek N.H.A. and certain scientific/natural areas.
- 2 Mar -- ELECTIONS TO THE BOARD OF DIRECTORS
-- Prairie grasses of Minnesota - Dr. Anita Cholewa (Dept. of Botany) - A look at some of the native prairie grasses and the prairie communities that once were extensive in the state.
- 6 Apr -- Native plant collection at the U.S. National Arboretum - Cole Burrell (U.M. Arboretum) - A view of the living native plant collection.
- ? Apr -- Special Saturday symposium to discuss the problem of plant introductions that have become serious pests. More information will be provided in the next newsletter and at future meetings.
- 4 May -- Annual seed/seedling exchange and a look at some of the summer field trip offerings.

NOMINATIONS OF MEMBERS FOR ELECTION TO MNPS BOARD

The terms-of-office of three Board members (Neil Anderson, Jim Schuster, and Chris Soutter) expire this spring. The following people have been nominated and are willing to serve. Elections will be held at the March meeting.

Robin Fox -- piano tuner; amateur botanist
Shirley Kooyman -- UM Arboretum, education dept.
John Moriarity -- Bell Museum, herpetological exhibits and DNR,
Non-game Program
Gerald Ownbey -- Professor Emeritus of Botany
Roy Robison -- Minn Vitro, tissue culture grower
Nancy Sather -- DNR, Heritage Program

Whitewater State Park - November 1, 1987

Scientific Name	Common Name		
— <i>Acer saccharinum</i>	silver maple	— <i>Cypripedium calceolus</i>	yellow lady's-slipper
— <i>Acer saccharum</i>	sugar maple	— <i>Cystopteris bulbifera</i>	bladder-fern
— <i>Acer negundo</i>	boxelder	— <i>Cystopteris fragilis</i>	fragile-fern
— <i>Actaea rubra</i>	red baneberry		
— <i>Agrimonia striata</i>	agrimony	— <i>Dactylis glomerata</i>	orchard grass
— <i>Agropyron repens</i>	quack grass	— <i>Desmodium glutinosum</i>	tick-trefoil
— <i>Allium tricoccum</i>	wild leek	— <i>Diervilla lonicera</i>	northern bush honeysuckle
— <i>Amorpha canescens</i>	leadplant		
— <i>Amorpha fruticosa</i>	false indigo	— <i>Echinochloa crusgalli</i>	barnyard grass
— <i>Anemone canadensis</i>	canada anemone	— <i>Echinocystis lobata</i>	wild cucumber
— <i>Anemone riparia</i>	thimbleweed	— <i>Elymus virginicus</i>	virginia wild rye
— <i>Antennaria neglecta</i>	field pussytoes	— <i>Epilobium glandulosum</i>	willow herb
— <i>Antennaria neodioica</i>	pussytoes	— <i>Equisetum arvense</i>	common horsetail
— <i>Apocynum androsaemifolium</i>	spreading dogbane	— <i>Equisetum hyemale</i>	scouring rush
— <i>Apocynum cannabinum</i>	indian hemp	— <i>Erigeron annuus</i>	annual daisy fleabane
— <i>Arabis canadensis</i>	sickle-pod	— <i>Erigeron philadelphicus</i>	fleabane
— <i>Aralia nudicaulis</i>	wild sarsaparilla	— <i>Erigeron strigosus</i>	daisy fleabane
— <i>Aralia racemosa</i>	spikenard	— <i>Erysimum cheiranthoides</i>	wormseed-mustard
— <i>Arisaema triphyllum</i>	jack-in-the-pulpit	— <i>Eupatorium altissimum</i>	tall joe-pye-weed
— <i>Asclepias syriaca</i>	common milkweed	— <i>Eupatorium purpureum</i>	green-stemmed joe-pye-weed
— <i>Asclepias tuberosa</i>	butterfly-weed	— <i>Eupatorium rugosum</i>	white snakeroot
— <i>Asparagus officinalis</i>	asparagus	— <i>Eupatorium sessilifolium</i>	upland boneset
— <i>Aster laevis</i>	smooth aster	— <i>Euphorbia corollata</i>	flowering spurge
— <i>Aster prenanthoides</i>	aster		
— <i>Athyrium angustum</i>	lady-fern	— <i>Fraxinus americana</i>	white ash
		— <i>Fraxinus pennsylvanica</i>	green ash
— <i>Baptisia leucophaea</i>	false indigo		
— <i>Barbarea vulgaris</i>	winter cress	— <i>Galium boreale</i>	northern bedstraw
— <i>Betula papyrifera</i>	paper birch	— <i>Gerardia gattingeri</i>	Gattinger's gerardia
— <i>Blephilia hirsuta</i>	hairy-wood mint	— <i>Geum aleppicum</i>	avens
— <i>Bouteloua curtipendula</i>	side-oats grama	— <i>Geum canadense</i>	white avens
— <i>Brasica kaber</i>	charlock	— <i>Glyceria striata</i>	mann grass
— <i>Bromus inermis</i>	brome		
— <i>Bromus kalmii</i>	kalm's brome	— <i>Hackelia deflexa</i>	beggar's lice
		— <i>Helianthus occidentalis</i>	naked sunflower
— <i>Calamagrostis canadensis</i>	canada bluejoint	— <i>Heliopsis helianthoides</i>	ox-eye
— <i>Campanula americana</i>	tall bellflower	— <i>Heracleum lanatum</i>	cow parsnip
— <i>Campanula rotundifolia</i>	harebell	— <i>Heuchera richardsonii</i>	alum root
— <i>Camptosorus rhizophyllus</i>	walking fern	— <i>Hieracium scabrum</i>	hawkweed
— <i>Carduus nutans</i>	nodding thistle	— <i>Hypericum punctatum</i>	dotted St. John's-wort
— <i>Carex albursina</i>	sedge	— <i>Hypoxis hirsuta</i>	star grass
— <i>Carex amphibola</i>	sedge		
— <i>Carex backii</i>	sedge	— <i>Impatiens capensis</i>	jewel-weed
— <i>Carex blanda</i>	sedge	— <i>Impatiens pallida</i>	pale jewel-weed
— <i>Carex cephaloidea</i>	sedge		
— <i>Carex cephalophora</i>	sedge	— <i>Jeffersonia diphylla</i>	twingleaf
— <i>Carex convoluta</i>	sedge	— <i>Juglans cinerea</i>	butternut
— <i>Carex deweyana</i>	sedge	— <i>Juglans nigra</i>	blackwalnut
— <i>Carex eburnea</i>	sedge	— <i>Juncus dudleyi</i>	rush
— <i>Carex hirtifolia</i>	sedge	— <i>Juniperus communis</i> var. <i>depressa</i>	juniper
— <i>Carex hitchcockiana</i>	sedge	— <i>Juniperus horizontalis</i>	creeping juniper
— <i>Carex laxiculmis</i>	sedge	— <i>Juniperus virginiana</i>	red cedar
— <i>Carex oligocarpa</i>	sedge		
— <i>Carex peckii</i>	sedge	— <i>Krigia biflora</i>	two-flowered cynthia
— <i>Carex pedunculata</i>	sedge		
— <i>Carex pennsylvanica</i>	sedge	— <i>Lathyrus ochroleucus</i>	pale vetchling
— <i>Carex sparganioides</i>	sedge	— <i>Lathyrus venosus</i>	vetchling
— <i>Carex sprengei</i>	sedge	— <i>Liatris aspera</i>	blazing star
— <i>Carex stipitata</i>	sedge	— <i>Liatris cylindracea</i>	dwarf blazing star
— <i>Carex vulpinoidea</i>	sedge	— <i>Lilium michiganse</i>	turk's-cap lily
— <i>Carpinus caroliniana</i>	blue beech	— <i>Linum sulcatum</i>	yellow flax
— <i>Carya cordiformis</i>	bitternut hickory	— <i>Liparis lilifolia</i>	twayblade
— <i>Ceanothus americanus</i>	New Jersey tea	— <i>Lithospermum canescens</i>	hoary puccoon
— <i>Celastrus scandens</i>	bittersweet	— <i>Lithospermum latifolium</i>	gromwell
— <i>Celtis occidentalis</i>	hackberry	— <i>Lobelia spicata</i>	pale spike lobelia
— <i>Cerastium vulgatum</i>	mouse-ear chickweed	— <i>Lychnis alba</i>	white cockle
— <i>Cheilanthes feei</i>	lip-fern	— <i>Lysimachia ciliata</i>	fringed loosestrife
— <i>Circaea lutetiana</i>	nightshade		
— <i>Cirsium arvense</i>	canada thistle	— <i>Maianthemum canadense</i>	wild lily-of-the-valley
— <i>Coreopsis palmata</i>	coreopsis	— <i>Medicago sativa</i>	alfalfa
— <i>Cornus alternifolia</i>	alternate-leaved dogwood	— <i>Melilotus officinalis</i>	yellow sweet clover
— <i>Cornus foemina</i>	dogwood	— <i>Mentha arvensis</i>	mint
— <i>Cornus racemosa</i>	grey dogwood	— <i>Monarda fistulosa</i>	bergamot
— <i>Corylus americana</i>	hazelnut	— <i>Morus rubra</i>	red mulberry
— <i>Cryptotaenia canadensis</i>	honeysuckle		

— <i>Nasturtium officinale</i>	water cress	— <i>Vaccinium angustifolium</i>	blueberry
— <i>Nepeta cataria</i>	catnip	— <i>Verbascum thapsus</i>	mullein
— <i>Ostrya virginiana</i>	ironwood	— <i>Veronica americana</i>	american brooklime
— <i>Oxalis stricta</i>	yellow wood-sorrel	— <i>Veronicastrum virginicum</i>	culver's root
— <i>Panicum leibergii</i>	panic grass	— <i>Vicia angustifolia</i>	vetch
— <i>Parthenocissus quinquefolia</i>	virginia creeper	— <i>Viola cucullata</i>	blue marsh-violet
— <i>Pastinaca sativa</i>	wild parsnip	— <i>Viola nephrophylla</i>	kidney-shaped violet
— <i>Pellaea glabella</i>	smooth cliffbrake	— <i>Viola pedata</i>	prairie violet
— <i>Petalostemum candidum</i>	white prairie-clover	— <i>Viola pedatifida</i>	bird's-foot violet
— <i>Petalostemum purpureum</i>	purple prairie-clover	— <i>Vitis riparia</i>	river grape
— <i>Phalaris arundinacea</i>	reed canary grass	— <i>Xanthoxylum americanum</i>	prickly ash
— <i>Phleum pratense</i>	timothy	— <i>Woodsia oregana</i>	oregon woodsia
— <i>Physalis virginiana</i>	ground cherry	— <i>Zizia aurea</i>	golden alexander
— <i>Physocarpus opulifolius</i>	ninebark	— <i>Zygadenus elegans</i>	white camas
— <i>Pinus strobus</i>	white pine		
— <i>Poa compressa</i>	canada bluegrass		
— <i>Poa palustris</i>	fowl meadow-grass		
— <i>Poa pratensis</i>	bluegrass		
— <i>Poa trivialis</i>	bluegrass		
— <i>Poa wolfii</i>	wolf's bluegrass		
— <i>Polygala senega</i>	seneca snakeroot		
— <i>Polygonatum canaliculatum</i>	solomon's seal		
— <i>Polypodium virginianum</i>	common polypody		
— <i>Populus deltoides</i>	cottonwood		
— <i>Populus grandidentata</i>	big-toothed aspen		
— <i>Populus tremuloides</i>	trembling aspen		
— <i>Potentilla norvegica</i>	cinquefoil		
— <i>Prunus americana</i>	wild plum		
— <i>Prunus pensylvanica</i>	pin cherry		
— <i>Prunus serotina</i>	black cherry		
— <i>Prunus virginiana</i>	chokecherry		
— <i>Pteridium aquilinum</i>	bracken fern		
— <i>Quercus alba</i>	white oak		
— <i>Quercus ellipsoidalis</i>	jack oak		
— <i>Quercus macrocarpa</i>	bur oak		
— <i>Quercus rubra</i>	red oak		
— <i>Ratibida pinnata</i>	prairie coneflower		
— <i>Rhamnus cathartica</i>	european buckthorn		
— <i>Rhus glabra</i>	smooth sumac		
— <i>Rhus radicans</i>	poison ivy		
— <i>Rhus typhina</i>	staghorn sumac		
— <i>Ribes cynosbati</i>	prickly gooseberry		
— <i>Rorippa islandica</i>	yellow cress		
— <i>Rubus strigosus</i>	red raspberry		
— <i>Rudbeckia laciniata</i>	tall coneflower		
— <i>Rudbeckia serotina</i>	black-eyed susan		
— <i>Salix interior</i>	sandbar willow		
— <i>Salix nigra</i>	black willow		
— <i>Sambucus canadensis</i>	common elder		
— <i>Sanicula marilandica</i>	black snakeroot		
— <i>Scirpus atrovirens</i>	green bulrush		
— <i>Scophularia lanceolata</i>	figwort		
— <i>Scutellaria leonardi</i>	small skullcap		
— <i>Senecio aureus</i>	golden ragwort		
— <i>Silene stellata</i>	starry campion		
— <i>Silphium perfoliatum</i>	cup-plant		
— <i>Sisyrinchium campestre</i>	prairie blue-eyed grass		
— <i>Smilacina racemosa</i>	false solomon's seal		
— <i>Smilax hispida</i>	greenbrier		
— <i>Smilax lasioneura</i>	greenbrier		
— <i>Solanum dulcamara</i>	bittersweet		
— <i>Solidago sciaphila</i>	goldenrod		
— <i>Stachys palustris</i>	hedge-nettle		
— <i>Stachys tenuifolia</i>	smooth hedge-nettle		
— <i>Staphylea trifolia</i>	bladdernut		
— <i>Stellaria graminea</i>	chickweed		
— <i>Tilia americana</i>	basswood		
— <i>Tragopogon dubius</i>	goat's beard		
— <i>Ulmus americana</i>	american elm		
— <i>Ulmus rubra</i>	red elm		

MEMBERSHIP QUESTIONNAIRE

Please take the time to answer the following questions and return this to MNPS, 220 Biol. Sci. Center, U. of M., St. Paul MN 55108 or bring it to the next meeting. Thanks.

1. Would you be interested in participating in conservation-oriented activities, such as helping eradicate purple loosestrife or buckthorn from a designated area, or helping with spring trail clean-up in a park or preserve?

Yes _____ Yes, but only a few hours _____ No _____

2. Would you like to see a column in the newsletter devoted to topics of immediate conservation concern?

Yes _____ No _____

3. Would you like the MNPS provide semi-technical material relating to Minnesota's native plants, such as species checklists for a particular area?

Yes _____ No _____

4. Would you be interested in volunteering to help with various research projects that The Nature Conservancy, the DNR, or the U of M Botany or Ecology depts. might have (such as the County Biological Survey, prescribed burning, or helping collect field data for a researcher)?

Yes _____ Day trips _____ Weekend trips _____ No _____

5. Would you like to participate in promoting our society at the State Fair or environmental expositions?

Yes _____ No _____

7. Would you be interested in a summer weekend campout, especially if there were opportunities for short or long, guided or unguided, wildflower hikes?

Yes _____ No _____

8. Would you be interested in a major annual meeting with a specially invited speaker?

Yes _____ No _____

8a. Would you like this meeting to be in conjunction with a dinner?

Yes _____ No _____

9. Would you be interested in a membership directory with names, addresses, phone numbers?

Yes _____ No _____

9a. Would you object to having your name in such a directory?

Yes _____ No _____

9b. Would you object to making such a directory available to other conservation organizations?

Yes _____ No _____

10. In what other activities/issues would you like to see the MNPS become involved?

11. What speaker topics or summer field trips would you like to have in the future?

12. What other improvements would you like to see in MNPS?

13. We need your help. In which of the following committees, would you like to become involved (even if only a little)?

Education & lectures _____

Research & conservation (includes arranging activities) _____

Publicity & welcoming (includes arranging refreshments
for monthly meetings) _____

Workshops & field trips (planning) _____

Membership (record keeping & promotion) _____

Historian & society records _____

Newsletter _____

Name _____ Phone _____

Address _____

THE MINNESOTA COUNTY BIOLOGICAL SURVEY: A project of the Natural Heritage and Nongame Wildlife programs, DNR

Minnesotans can be proud that within our borders exists a distinctive combination of plants, animals, and habitat types. The protection and wise management of the rarest of these features can be Minnesota's contribution to the worldwide effort to maintain the Earth's biological diversity.

In order to preserve the state's diversity, the location and status of rare natural communities, animals, plants, and other significant features must be identified. Past inventory efforts reveal that directed surveys in localized areas reveal a wealth of new information. Based on this knowledge the DNR has initiated a county-by-county survey designed to evaluate systematically the state's rare features.

Started last spring, the Biological Survey has already generated new locations of special features, which are being recorded on the Natural Heritage Program computerized databases. These data will be used in the development of Geographical Information Systems.

The systematic collection and storage of these data will enable DNR to respond more effectively to requests for information used in land-use planning, public and private conservation protection, and public education. However, the application of this information and implementation of measures to protect these features - in harmony with other human needs - is a shared responsibility. Whether the issue is highway routing, housing development, or nature preserve design, we all have a role to play if Minnesota is to maintain a healthy, diverse environment.

-- Minnesota DNR

TAKE PRIDE IN AMERICA

As America has become more industrialized, urbanized, populated, and mobile, use of public lands has climbed dramatically. With this trend has come an alarming increase in careless abuse of the land and property that was intended for the use and enjoyment of everyone.

This led to the Take Pride In America idea. This program was initiated in 1986 to make Americans more aware of the importance of caring for public lands and encourage a sense of responsible stewardship of natural resources. A major part of this campaign is citizen participation. Planting trees, posting signs, reducing litter and vandalism, reporting illegal activities, and preventing accidental fires are some of the efforts to protect the quality of public lands.

America's public lands belong to all of us -- over 700 million acres of federal lands that include national forests, parks, wildlife refuges, multiple-use lands, reservoirs, and recreational areas. Public lands also include millions of acres of state parks, forests, wildlife preserves, neighborhood playgrounds, and urban areas.

We can enjoy our magnificent lands, waters, wildlife, plants, and history; but we must all help care for them to ensure they will be around for future generations. Individually, we can make a difference. Together there is no limit to what we can do. Take Pride In America! This land is our land.

-- extracted from: U.S.F.W.S., Detroit Lakes
Wetland Mgmt. Dist. Newsletter

ENDANGERED SPECIES ACT UP FOR REAUTHORIZATION

The Congress of the United States gave special attention to the problem of disappearing species by passing the Endangered Species Act of 1973 and has encouraged its implementation with continuing support. Legislation has been introduced in both the House of Representatives (H.R. Bill 1467) and the Senate (S. Bill 675) to reauthorize the ESA for 5 years.

Significant progress has been made under the administration of the Fish and Wildlife Service in identifying some species in substantial danger of extinction and beginning the process of their recovery. However, several major issues affect plant species particularly. These are:

1. Current law prohibits only the removal of plants from federal lands but does not protect against arbitrary or wanton destruction of the same on such lands.
2. Under current law, candidate species are not protected.
3. Under current funding levels, many years will be required to process the large number of candidate species, whose biological status remains either uncertain or unknown. During this time it is possible that some of the candidate species may show further decline in numbers of populations.

Therefore, Congress is strongly urged to reauthorize the Endangered Species Act and to address the following issues:

1. Prohibit the destruction of threatened and endangered plant species and their critical habitats on public lands and encourage an active partnership between federal agencies and landowners in protecting such species on private lands.
2. Encourage and expand the efforts of the Fish & Wildlife Service in completing studies on all candidate species in a timely fashion.
3. Encourage the provision of special, temporary protection for candidate species until their status has been adequately ascertained.

-- extracted from a resolution passed by the
American Society of Plant Taxonomists

Please write to your Congressman and/or Senator regarding this important issue, showing your support for rare plants. In Minnesota, we have two federally listed plants: the Endangered endemic Erythronium propullans and the Threatened Lespedeza leptostachya.

CHECKLISTS FOR STATE PARK PLANTS

The DNR and MNPS are beginning to compile vascular plant checklists for Minnesota's state parks. The first completed one, Whitewater State Park, is included with this issue of the newsletter. Before the winter is over we hope to have available checklists for Forestville, Beaver Creek Valley, Lake Louise, Kilen Woods, and Nerstrand Woods. If you would like any of these future lists, contact Welby Smith or any MNPS Board member (see last page of this newsletter for phone numbers) and the lists will be mailed to you as they become available. These are preliminary lists, so we are counting on you to let us know of new

discoveries. We will try to keep the master checklists updated so revisions can be issued periodically.

-- Welby Smith

OPPORTUNITIES AT THE U OF M HERBARIUM

Can't work in your garden now that winter is here? Have some spare time on your hands? Don't let the "winter blues" get you down. Volunteer to work with plant specimen preparation at the Herbarium, on the St. Paul campus. For more information about working with lichens contact Dr. Cliff Wetmore, 625-6292; for mushrooms and flowering plants contact Dr. Nita Cholewa, 625-0215.

FROM THE U OF M ARBORETUM

Festival of Trees

The Arboretum is proud to present again an outstanding display of trees decorated with handcrafted ornaments. This year's theme is "A Minnesota Christmas." Ornaments will be made using plants found in Minnesota or designed to reflect the culture and heritage of the state. The Festival of Trees will be open to the public from 5-27 December (except for 24-25 December when the Arboretum is closed). Regular gate fee charged.

Seminars

"The U.S. National Arboretum" -- Cole Burrell, former Curator of Native Plants at the Natl. Arboretum, will provide a view of the gardens and special collections. Sunday, 10 January, 1:30-2:30 pm, Arboretum Auditorium. Regular gate fee charged.

"America's Paradise: the Virgin Islands" -- Shirley Mah Kooyman will describe the people, plants, and geography of St. Thomas, St. Croix, and the National Park on St. John. Sunday, 24 January, 1:30-2:30 pm, Arboretum Auditorium. Regular gate fee charged.

Garden Tours

Two guided garden tours are being offered by staff members. The first, to New Orleans and Cajun country, will be 19-25 March 1988, hosted by Marvin Eisel. Peter Olin (Director of the Arboretum) will then host a tour to Ireland, including Limerick, Killarney, and Dublin, from 9-19 June 1988. For more information call Travelways in Wayzata at 612-475-9975.

HOLLY SEEDS NEEDED

The Arboretum of Bokrijk, Belgium, has the largest collection of hollies (*Ilex* spp.) on the European continent. Although their collection is quite extensive, several species are absent. They are interested in obtaining seed of the following:

Ilex laevigata
I. amelanther

I. longipes I. montana
I. montana var. mollis

If you have any of these hollies in your garden and would like to contribute seed samples, please send the material in marked envelopes to me, Nita Cholewa (Dept. of Botany, U of M, St. Paul 55108).

WILDFLOWER SEEDS AVAILABLE

The New England Wild Flower Society is offering for sale more than 150 varieties of wildflowers and ferns in their "1988 Seed List." Included in the list are natives [presumably New England natives] for woodland, wetland, and meadow gardens. Many of the sun-loving plants make colorful additions to perennial borders. The "Seed List" is an adjunct of the Society's world-wide botanical garden seed distribution effort. All requests for the "1988 Seed List" must be received by March 1; seed sales close March 15. Requests will be filled in the order received.

Send a self-addressed, \$0.37-stamped envelope (#10, business size) to: Seeds, New England Wild Flower Society, Garden in the Woods, Hemenway Road, Framingham, MA 01701.

No requests for seed lists will be honored without the stamped envelope.

PLANTS OF CHRISTMAS-PAST

Frankincense, one of the gifts of the Magi, was once as highly prized as gold and subject to intense security. Used as an incense to consecrate temples, as a healing agent, and as an ingredient in cosmetics, it was considered the "perfume of the gods." Pure frankincense is a resin obtained from small cuts in the bark of living trees of the genus Boswellia (Burseraceae). The highest quality comes from B. sacra, which grows in southern Saudi Arabia near the Arabian Sea. Used for thousands of years by the Egyptians and then by the Greeks and Romans, frankincense today is little used outside Arabia.

-- Nita Cholewa

MEA CULPA

Congratulations to those of you who caught the error on page 1 of the last newsletter; your editor takes full blame. Minnesota does not have 28 species of orchids -- we have 44!

PLAN NOW FOR UPCOMING EVENTS

Restoring the Earth

A conference on repairing environmental damage to be held at the University of California - Berkeley, 13-16 January 1988. For more information contact: Restoring the Earth Conference, 1713 C Martin Luther King Jr. Way, Berkeley CA 94709 or call 415-843-2645.

Ecosystem Management: Rare Species and Significant Habitats

A symposium sponsored by the Natural Areas Association and the College of Environmental Science & Forestry of the State University of New York. 6-9 June 1988 at the Syracuse campus of SUNY. For more information contact: Dr. Donald Leopold or ESF Continuing Education, College of Environmental Science & Forestry, S.U.N.Y., Syracuse NY.

National Audubon Ecology Camp - Spooner, WI

1-2 week sessions available for families or individuals; activities generally emphasize bird studies, plant and animal population and lore, chemistry of northern lakes, and opportunities for canoeing and photography. For more information contact: Tom McGuigan, National Audubon Society, 612-379-3868.

Minnesota Elderhostel - various locations

2-week long sessions for adults 60+; wide variety of subjects taught in an informal fashion, such as "autumn in the northwoods," "mice to moose; bogs to bugs: the forest world." Last year the program was offered in 37 different locations throughout MN. For more information contact: Carol Daly, State Director - MN Elderhostel, 612-624-7004.

LAST CALL FOR 1987/1988 MNPS DUES

Our bylaws call for membership renewal each fall. Many members have still not renewed for this year. This newsletter, correspondence, and other activities are supported solely by dues and donations. Please send your dues check today (your last dues paid are indicated on your mailing label); this is the last newsletter for lapsed memberships.

Minnesota Native Plant Society Membership Registration

Mail to: Minnesota Native Plant Society, 220 Biological Sciences Center, Univ. of Minnesota, St. Paul, MN 55108

_____ Renewal

_____ New Member

Membership categories:

\$8.00 _____ Individual

\$6.00 _____ Senior (over 62 or retired)

\$10.00 _____ Family

\$15.00 _____ Institution

\$6.00 _____ Student (full-time)

\$25.00 _____ Donor

Name _____ Address _____

City _____ State _____ Zip _____ Phone _____

U. OF M. CAMPUS ADDRESS: _____

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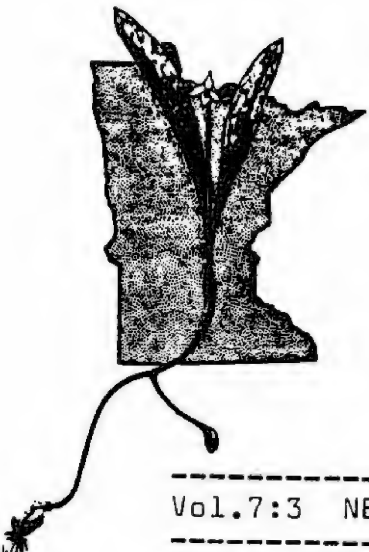
Newsletter Staff

Nita Cholewa, editor
Debbie Olmstead, typist

If you have a news item or article that should be included in the next issue of the Minnesota Plant Press, please send it to Nita, Dept. of Botany, Univ. of Minnesota, St. Paul, MN 55108.

Minnesota Plant Press may be obtained through membership in the Society.

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Saint Paul, Minnesota 55108



MINNESOTA PLANT PRESS

Vol. 7:3 NEWSLETTER OF THE MINNESOTA NATIVE PLANT SOCIETY Spring 87/88

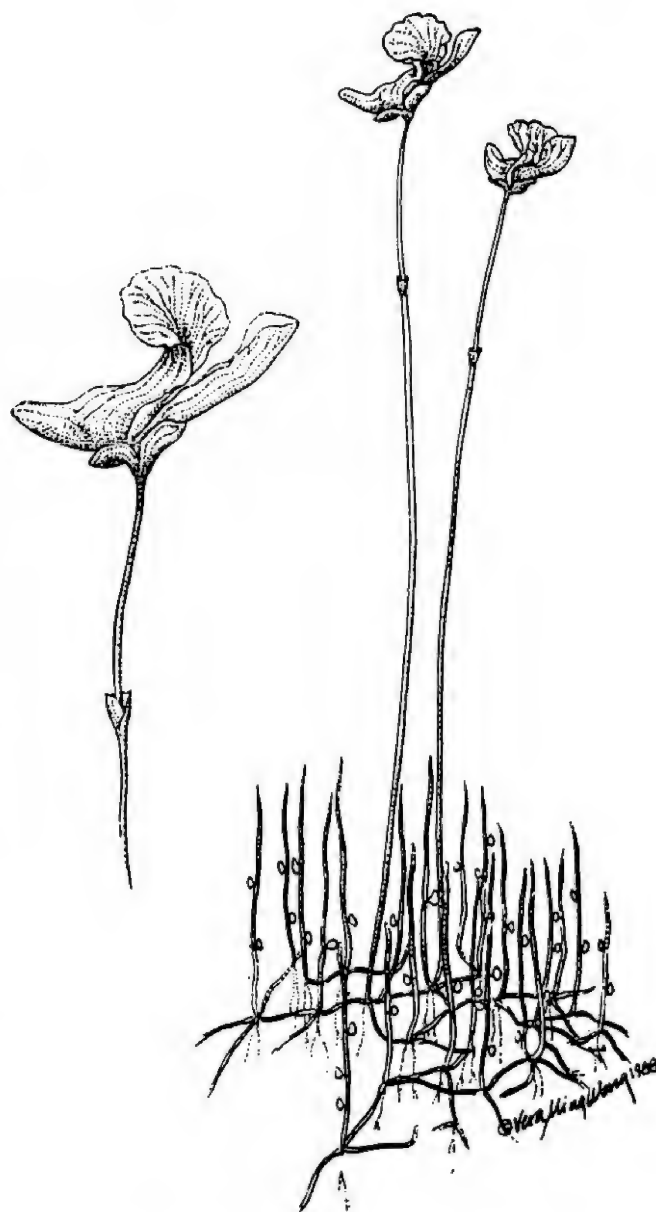
A NEW BLADDERWORT FOR MINNESOTA *****

One of the most exciting things about botanizing in Minnesota (or anywhere for that matter) is the unexpected thrill of finding a new state record; a species never before found here. Chel Anderson and Bruce Knowles recently were lucky enough to make such a discovery.

In August 1982, both Chel and Bruce were employed by the U. S. Forest Service as Wilderness Rangers in the BWCA. While they were camped on Makwa Lake, Chel found a small, unfamiliar bladderwort growing on the sandy beach. Bladderworts are members of the genus Utricularia, and would probably seem uninteresting if it weren't for their carnivorous habit. Their bladders actually trap and digest tiny aquatic animals. The species Chel found is especially interesting because it has purple flowers; all of the previously known Minnesota bladderworts have yellow flowers. As it turned out, the new species is Utricularia resupinata, and is definitely a state record!

I never need much of an excuse to head for the BWCA, so when I heard about Chel's discovery I packed up my plant press and, with Vera Wong, headed north. We entered the BWCA at Kawishiwi Lake, and after 3 days of paddling we arrived at Makwa Lake. On a small sandy spit in a protected bay we found hundreds of Utricularia resupinata. The habitat is actually very rare in the BWCA. Most of the lake shores are marshy or covered with boulders, and do not have extensive sandy beaches. So if anyone knows of other potential beaches, please let me know.

Because of this new discovery, and because of an increased interest in bladderworts as a whole, I have prepared the following key to the Utricularia of Minnesota, with illustrations by Vera Wong.



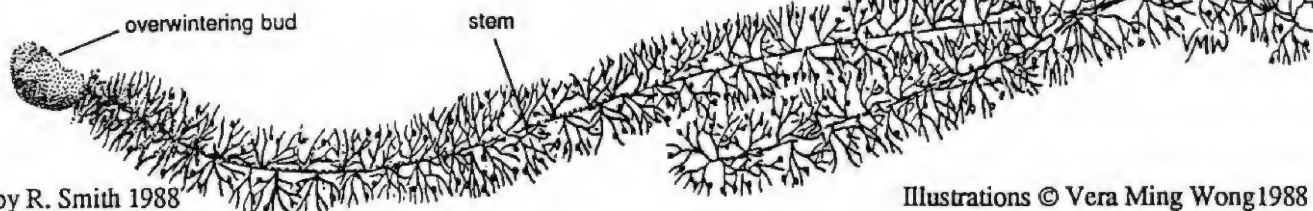
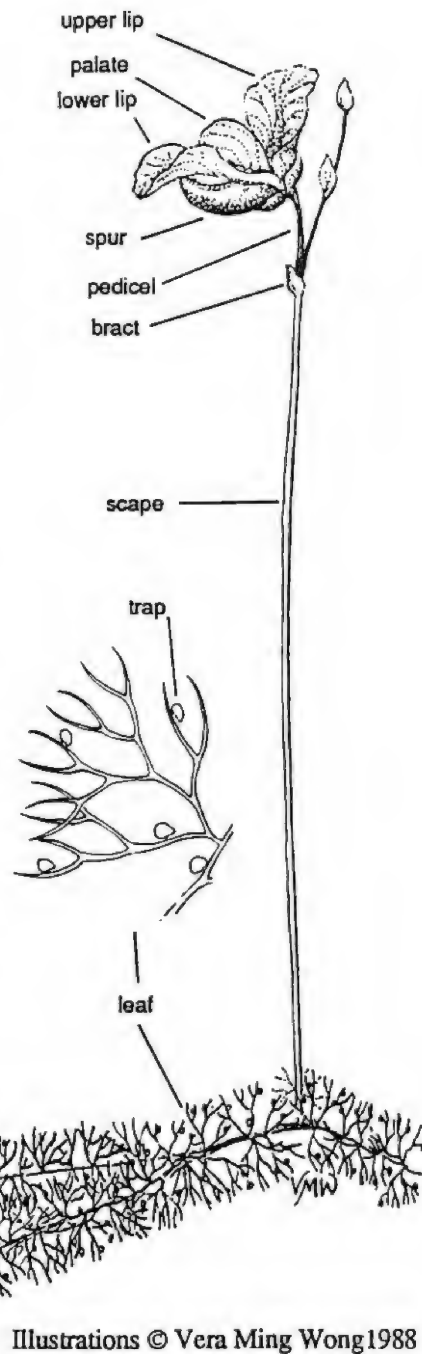
Utricularia L. (bladderwort)

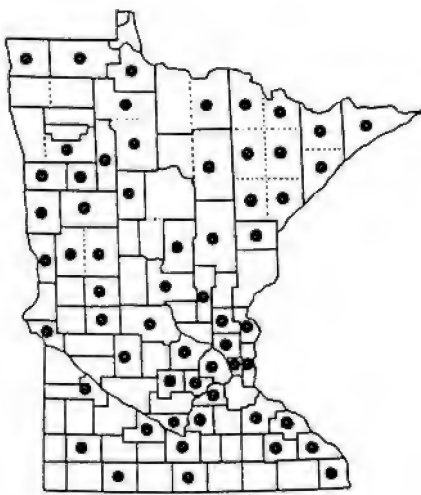
Small herbaceous plants, mostly aquatic, but some terrestrial on wet sand or peat. The aquatic species are rootless and free-floating, the terrestrial species produce tiny roots from the nodes of subterranean stems. Leaves alternate, dissected or simple, frequently bearing small but elaborate traps. When activated by stimulation of bristles near the entrance, the lateral walls of the trap expand rapidly, sucking in water, and the prey, through a trap door. In this manner, an abundance of daphnia, cyclops and especially mosquito larvae are caught. When the prey is digested, the trap automatically resets itself. The traps are normally filled with water and do not function as flotation devices as is implied by the common name. Calyx deeply 2-lobed; corolla bilabiate, the upper lip erect, or nearly so, the lower lip more-or-less 3-lobed and spurred at base, with a prominent palate often projecting over the throat.

About 250 species distributed worldwide, but mostly in the tropics. Six species are known in Minnesota. The 2 terrestrial species (nos. 5 & 6) are annuals and somewhat ephemeral; the 4 aquatic species (nos. 1-4) are perennials, producing compact overwintering buds of closely appressed leaves. All of our species have yellow flowers except for the purple-flowered *U. resupinata*. An additional purple-flowered species, *U. purpurea*, has been reported from the state, but no specimen has been seen. It can be easily distinguished by its whorled leaves, and should be sought in lakes and ponds in east-central Minnesota. (Name from the Latin *utriculus*, a small bottle with yielding sides, referring to the traps).

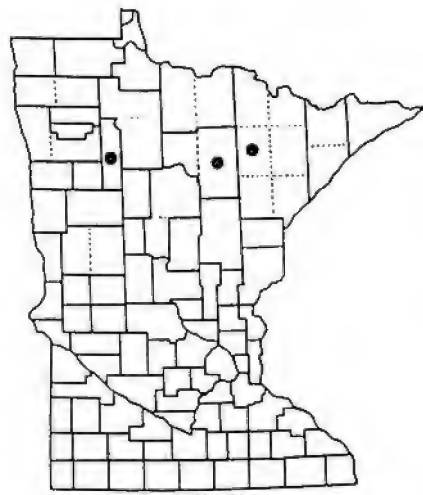
Key to *Utricularia* in Minnesota

- a. Leaves dissected into 2 or more elongate segments; plants free-floating; stems not buried or anchored, but sometimes stranded on shores.
 - b. Ultimate leaf-segments terete or capillary, not flattened; lower lip of the corolla about equal to the upper.
 - c. Plant coarse, the long stem 0.4 mm or more thick; leaves 1.5-7 cm long, with numerous segments; scape stout 1. *U. vulgaris*
 - c. Plant delicate, the short, filiform stems less than 0.3 mm thick; leaves 0.2-1 cm long, with mostly 2 segments; scape filiform..... 2. *U. gibba*
 - b. Ultimate leaf-segments flat; lower lip of the corolla about twice as long as the upper.
 - d. Traps borne on the leaves; margins of terminal leaf-segments entire; midvein not evident..... 3. *U. minor*
 - d. Traps borne on separate, leafless branches; margins of terminal leaf-segments minutely spinose-serrulate; midvein evident 4. *U. intermedia*
- a. Leaves simple, much reduced; plants not free-floating, but terrestrial on wet sand, peat or mud; the stem, leaves and traps below ground, only the scape visible.
 - e. Flowers 1; corolla purple; bracts consisting of a single pair fused into a tube 5. *U. resupinata*
 - e. Flowers 1-3; corolla yellow; bracts several, not fused 6. *U. cornuta*

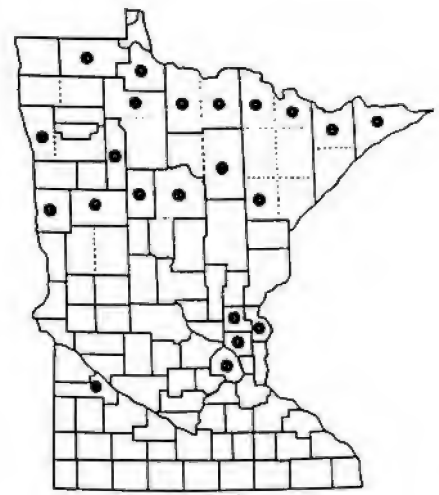




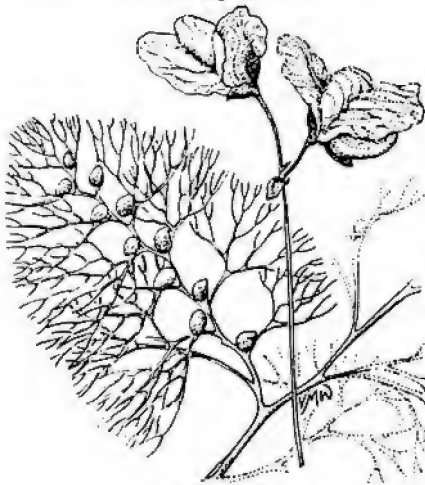
U. vulgaris



U. gibba



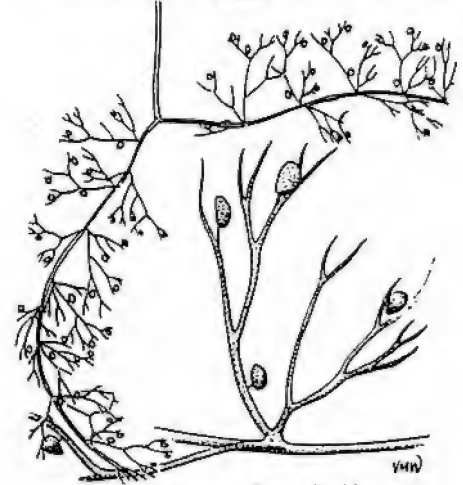
U. minor



U. vulgaris



U. gibba



© Vera Ming Wong 1988
U. minor

1. *U. vulgaris* L. (common), common bladderwort.

Aquatic; stems coarse, floating, 0.4 mm or more thick, up to 1 m long; leaves 1.5-7 cm long, divided into numerous coarse, capillary segments, bearing numerous traps; scapes stout, 1-4 dm high; bracts cordate-sessile, 4-7 mm long; flowers 3-20, in a lax raceme; corolla yellow with brown vertical stripes on the large palate; the broad lower lip equaling or slightly longer than the spur; capsule subglobose, 4-5 mm in diameter; overwintering buds compact, 1-3 cm long, usually lobed when fully developed.

Common statewide in circumneutral and weakly acidic lakes, ponds, rivers, ditches and marshes. Usually floating near the surface where it is relatively conspicuous. Circumboreal; south in North America to Mexico, but more common northward. July-Aug.

The North American plants are sometimes segregated as var. *americana* Gray on the basis of a more slender and somewhat acute spur, but the differences are probably not significant enough to warrant varietal status.

2. *U. gibba* L. (humped), humped bladderwort.

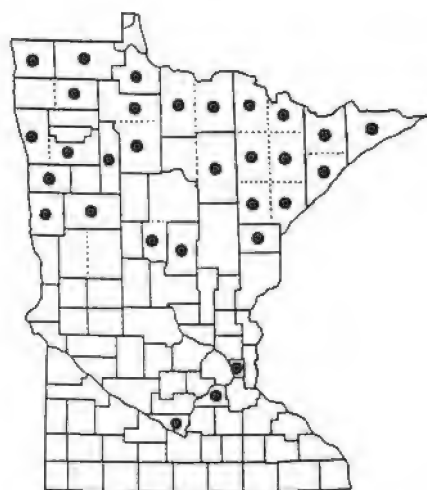
Aquatic; stems slender, floating, 0.1-0.3 mm thick, and 5-15 cm long; leaves scattered, 2-10 mm long, divided near the base into 2 capillary segments with relatively few scattered traps; scapes filiform, 2-6 cm high; bracts minute, clasping and tapering to a sessile base; flowers 1-3; corolla yellow; the lips nearly equal and projecting forward, the lower lip much longer than the spur, and with a prominent palate; mature capsule globular, 2-3 mm in diameter; overwintering buds lax, 1 mm or less in diameter.

Rare, or at least rarely collected, in bog pools, floating mats, and shallow lakes. This is the smallest and least conspicuous of the aquatic bladderworts. MN, Ont. & N.S. south to FL, TX and OK, also along the Pacific coast from B.C. to Central America, and the West Indies. July-Aug.

3. *U. minor* L. (smaller), lesser bladderwort.

Aquatic; stems threadlike, floating, 5-15 cm long; leaves 2-10 mm long, forked 2-4 times into flat, entire segments bearing few to many traps; scapes filiform, 4-15 cm high; bracts cordate-sessile; flowers 3-12; corolla yellow; upper lip ca one-half the length of the lower lip; spur very short and saccate; palate depressed and obscure; capsule subglobose, ca 2 mm in diameter; overwintering buds lax, 1.5-5 mm in diameter, but rarely collected.

Occasional in fen pools, wet meadows, shallow ponds and marshy lake shores. A reliable indicator of calcareous or circumneutral water, being intolerant of acidic conditions. Frequently associated with *chara* (stonewort), a marl-producing macroscopic alga. Circumboreal; south in North America to NJ, OH, IA, CO and CA. July-Aug.



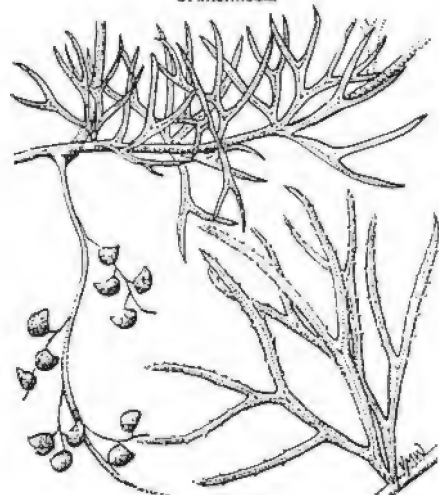
U. intermedia



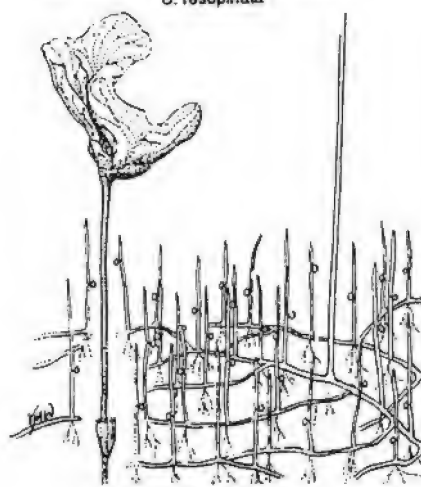
U. resupinata



U. cornuta



U. intermedia



U. resupinata



U. cornuta

© Vera Mingh Wang 1988

4. *U. intermedia* L. (intermediate).

Aquatic; stems slender, floating; leaves 0.4-1.5 cm long, flat, usually forked 3 times, each segment with a distinct midvein, margins of terminal segments minutely spinose-serrulate; traps borne on separate leafless branches up to 1.5 dm long; scapes stiff, 0.5-3.0 dm high; bracts cordate-sessile; flowers 2-5; corolla yellow; the upper lip much shorter than the lower; spur about as long as the lower lip; palate well developed; overwintering buds dense, hairy, 0.5-1.2 cm long, oval or elliptical.

Common in the northern half of the state, but rare in the southern half. Found in bog pools, quaking mats, marshy shores and sedge meadows, or sometimes floating in beds of submerged vegetation. Generally preferring circumneutral water, but more tolerant of acidic conditions than the preceding species, with which it sometimes occurs. Circumboreal; south in North America to NJ, PA, IO and CA. June-Aug.

5. *U. resupinata* B.D. Greene (turned upside down; referring to the position of the flower).

Terrestrial, or sometimes amphibious; stems filiform, buried in wet sand, and forming fine mats just below the surface; leaves simple, up to 4 cm long, acicular, subterranean and colorless or becoming green when exposed above the surface; traps minute, borne on the leaf-margins and occasionally on the delicate roots that emerge at the nodes; scapes filiform, 0.2-1.8 dm high, terminated by a single erect pedicel (appearing to be a continuation of the scape), 1.0-5.5 cm long, subtended by a single pair of bracts fused into a tube or cup; flower 1, resupinate (facing upwards); corolla purple; the broad lower lip much longer than the narrow upper one; spur much shorter than lower lip; palate obscure.

Apparently very rare in Minnesota. Occurring on wet sandy beaches and in shallow water of oligotrophic lakes in the northeast. In North America from MN, Que. and N.S. south to PA and IL, also in GA and FL. Aug.

6. *U. cornuta* Michx. (horned; referring to the shape of the spur), horned-bladderwort.

Terrestrial; stems delicate, buried in wet sand, peat or mud; leaves (rarely collected) simple, linear-filiform, colorless, subterranean, bearing a few minute traps; scapes stiff and wiry, 0.5-3.0 dm high; bracts deltoid-ovate; inner bractlets 2, acute, opposite; flowers 1-3, crowded on short pedicels, 1-2 mm long; corolla golden yellow; the upper lip 2-lobed, the larger lower lip with a large palate projecting over the throat; spur subulate, 8-12 mm long; capsule 3-5 mm in diameter, beaked.

Occasional in the northern one-third of the state, but only visible when flowering. Prefers wet, sunny habitats such as quaking mats, sandy shores, open bogs and sedge meadows. Throughout most of eastern North America from Ont. and Nfld south to FL and TX. July-Aug.

UPCOMING MNPS MEETINGS *****

- April 6 Native plant collections at the U.S. National Arboretum. Cole Burrell (University Arboretum) will give us a view of one of our national treasures.
- May 4 Wildflower garden plant and seedling sale (see notice later this newsletter);
Summer field trip discussions.

SOCIETY NEWS

At the Annual Meeting, held March 2, three new board members were elected to take the place of Chris Soutter, Neil Anderson, and Jim Schuster, whose terms expire at the end of August. The new people, serving three-year terms, are Robin Fox, John Moriarty, and Gerald Ownbey. Congratulations to the new; many thanks to the outgoing board members!

Other business discussed included the lawsuit, which has now been settled (a copy of the letter of settlement will soon be mailed to all members).

All members are invited to attend the monthly board meetings, which are held on the 1st Wednesday of each month, 6:00 p.m., Saint Paul Student Center cafeteria. Remaining meetings are April 6 and May 4.

TREASURER'S REPORT

Previous balance:

General fund	\$1,614.96
Legal fund	368.00
Total	<u>\$1,982.96</u>

Income May 87 - Feb. 88:

Memberships	\$1,286.00
Donations	27.00
Calendars	270.00
Plant sale	195.00
Interest	60.06
Total	<u>\$1,838.06</u>

Lawsuit fund:

Balance May 1, 1987	\$ 913.00
Lawyer fees	- 500.00
Misc. legal expenses	- 45.00
	<u>368.00</u>
Plant sale funds	195.00
Donations	27.00
Total	<u>\$ 590.00</u>

Expenses May 87 - Feb. 88:

Postage	\$ 207.53
Painting	257.92
Calendars	160.00
Misc. supplies	35.05
Display board	565.70
Artist fees	30.00
Total	<u>\$1,256.20</u>

Balance (as of February 29, 1988)

\$2,564.82

UPCOMING SPECIAL EVENTS *****

Invasive Weed Symposium -- 9 April

MNPS is sponsoring a symposium at Belwin Nature Center, dealing with three of the more invasive and persistent weeds threatening our native flora and wildlife habitat. Buckthorn in woodlands, purple loosestrife in wetlands, and leafy spurge in prairies and agricultural land are the subjects of intensive and expensive control efforts. Invited experts will discuss some of the problems associated with these plants. A display identifying the plants will provide additional information on their spread and some control methods.

After the symposium there will be time for a bag lunch (bring your own; we will provide coffee and cider) followed by guided hikes on the 320 acre Belwin property, which includes a wide variety of vegetation types.

You should already have received your registration materials and maps (if not, you may register by sending \$5 payable to the Minnesota Native Plant Society with a return address to: MNPS Symposium, c/o Department of Botany, University of Minnesota, Saint Paul, Minnesota 55108). To ensure a space, please register early; only a limited number of seats will be available.

Wildflower Garden Plant Seedling Sale -- 4 May

As part of the May 4 monthly meeting, a sale of wildflower garden transplants and seedlings will be held. There will be a .50 charge for each plant, with proceeds going to the MNPS general fund.

One of the MNPS goals is the conservation of native plants. By gardening with plants started from seed or transplants from another garden, we can enjoy wildflowers in our gardens without disturbing native populations.

Donations of native plants started from seed and native wildflower transplants from gardens are needed for this sale. Drop off your plants 10 minutes before the meeting, and please have labels with the name of plant and donor.

*** PLEASE DO NOT COLLECT WILD PLANTS FOR THIS SALE.

SUMMER CAMP-OUT 24-26 June 1988

The first annual MNPS summer camp-out will be held in the Aitkin area of central Minnesota, from Friday evening through Sunday afternoon, 24-26 June. Potential field trips include old cedar swamps, bogs, hardwood forest, and mushroom-hunting; leaders may include Dr. Anita Cholewa (UM-botanist), Ms. Audrey Engels (area botanist); Dr. David McLaughlin (UM-mycologist). A limited number of camping spaces (tent or hard-sided) are available on the Engels' property; these are primitive conditions with outhouses, some electrical hookups, and a barn in case a rain shelter is needed. Bring plenty of mosquito dope. There is no fee but preregistration is necessary. Call Nita Cholewa 612-625-0215. Maps and further details on the field trips will be made available at a later date.



SUMMER FIELD TRIPS

The following day trips have been arranged by MNPS for your enjoyment and education. Old clothes and sturdy walking shoes are the best attire. Bring a bag lunch, field guides, and binoculars (some of the areas are also exceptional birding spots). Carpooling is encouraged.

Beaver Creek Valley State Park

Date: Saturday, April 30, 1988

Time: 11:30 a.m. - 2:30 p.m.

Meeting Place: State park picnic area. From the Twin Cities take Hwy. 61 (I-494 intersects 61 in Newport) south to Winona, then go south on Hwy. 43 to I-90 east until it intersects Hwy. 76. Take Hwy 76 towards Caledonia, about 4 miles N.W. of town you will come to a "T" intersection; go right (west) and watch for the state park signs.

Leader: Roger Heimgartner - part-time naturalist at the park and science teacher.

Beaver Creek Valley State Park is located in southeastern Minnesota, in the Driftless Area (untouched by recent glaciation). An area dominated by hardwoods with numerous limestone cliffs through which Beaver Creek cuts. Goat Prairie will also be visited. This is a prime wildflower area for such spring plants as jack-in-the-pulpit, dutchman's breeches, and spring beauty, and in the prairie hopefully we will see pasque flowers.

Park permits are required for each vehicle (annual \$15, daily \$3).

Shattuck-St. Mary Nature Trail and River Bend Nature Center

Date: Saturday, May 7, 1988

Time: 11:00 a.m. - 2:00 p.m.

Meeting Place: Huckleberry Inn in Faribault. From the Twin Cities take I-35W south to Faribault. Take the first exit and stop at Huckleberry Inn.

Leader: Mr. Orwin Rustad, biology teacher at Shattuck-St. Mary School.

Shattuck-St. Mary owns a small tract of deciduous hardwoods through which trails have been placed advantageously. Two spring gems to be found here are the Minnesota trout-lily and the showy orchis. River Bend Nature Center is nearby with similar vegetation.

James McKee Prairie

Date: Saturday, June 18, 1988

Time: 9:00 - 11:00 a.m.

Meeting Place: Maplewood Nature Center, 2659 East 7th Street in Maplewood. There will be a brief introduction at the Nature Center before proceeding to the prairie, which is another 1.5 miles north.

Leader: Chris Soutter - former naturalist at Maplewood.

Jame McKee Prairie is an undisturbed remnant of wet-mesic prairie in Ramsey County. It is notable for its purity and diversity -- over 150 species of native plants occur on this three-acre site. The Prairie is owned by the City of Maplewood and managed by Maplewood Nature Center. Wear old shoes, long sleeves and pants, as this is a damp prairie.

*** Registration required - this trip will be limited to 25 participants in order to control impact on the prairie community. Call the Nature Center at 738-9383.

Summer Fieldtrips Continued

Strandness Prairie

Date: Saturday, August 20, 1988

Time: 11:00 a.m. - 2:30 p.m.

Meeting Place: Canon Bowl Restaurant at the top of the hill in Glenwood. From the Twin Cities take I-94 to Sauk Center, then go west on Hwy. 28 to Glenwood. Approximately 3 hour driving time. Carpooling encouraged.

Leader: Dr. Ellen Ordway - biology teacher of the University of Minnesota, Morris.

Strandness Prairie is a tallgrass prairie that has never been plowed or grazed. There are wet, mesic, and dry portions in the 37 acres, providing a feeling of the vastness of the original prairie. Two hundred plant species are known to occur. This is an excellent time to see many in bloom.

May Wright's Wildflower Garden

There will be no regular trip scheduled to May Wright's wildflower garden, but anyone interested can arrange a visit by calling . Flowers bloom in the various habitats from late April through summer and fall. May Wright's address is: 4157 Bellaire Avenue, White Bear Lake, Minnesota.

VOLUNTEER OPPORTUNITIES

A number of SNA projects need assistance. These include small tree and shrub clearing; purple loosestrife control; noxious weed surveys; sign repair; trail maintenance, and other chores. Persons interested in volunteering their time should contact Vicki Dunevitz (DNR - Section of Wildlife),

Lake Maria State Park

Lake Maria is one of our most underfunded and understaffed state parks. Located about 50 miles northwest of the Twin Cities, it is in an area of terminal moraines and Big Woods remnants. Volunteer activities include helping clear trails, checking for sign repairs, marking trail locations accurately on maps, and campsite maintenance. Volunteers should contact Lowell Jaeger (Lake Maria S.P.).

Nature Conservancy Volunteers

The Nature Conservancy also has a number of Preserve-related projects that could use some volunteer help. These are mostly labor intensive tasks. Persons interested in helping should contact Peg Kohring (TNC),

DOT REQUIRES ASSISTANCE *****

Highway/Railroad Rights-of-way Vegetation Survey: Beginning this spring, I will be surveying native vegetation along Minnesota highway/railroad rights-of-way (r.o.w.). I am currently seeking information on r.o.w.'s with existing prairie remnants (south and west Minnesota) or native showy wildflowers (central and northeast Minnesota). With the information gained from this study, the DOT plans to set aside quality tracts of vegetation for permanent preservation. In addition, we plan to designate some of these highways as "prairie corridors" or "wildflower routes". Any and all information on native vegetation along roadsides will be greatly appreciated.

UNUSUAL PLANTS OF TETTEGOUCHE STATE PARK *****

Tettegouche State Park, located in Lake Co., 4.5 miles northeast of Silver Bay, was established in 1979 to preserve a variety of natural features. Lake Superior shoreline, ancient lava headlands, cascades and waterfalls combine with relatively undisturbed northern hardwood forest and with spruce, pine, and cedar forests to make this park an exceptional treasure.

One of the challenges facing the park management is the inevitable development in relatively undisturbed vegetation. Countless hours of planning and agony go into each new development in attempts to minimize disruption of the flora and fauna.

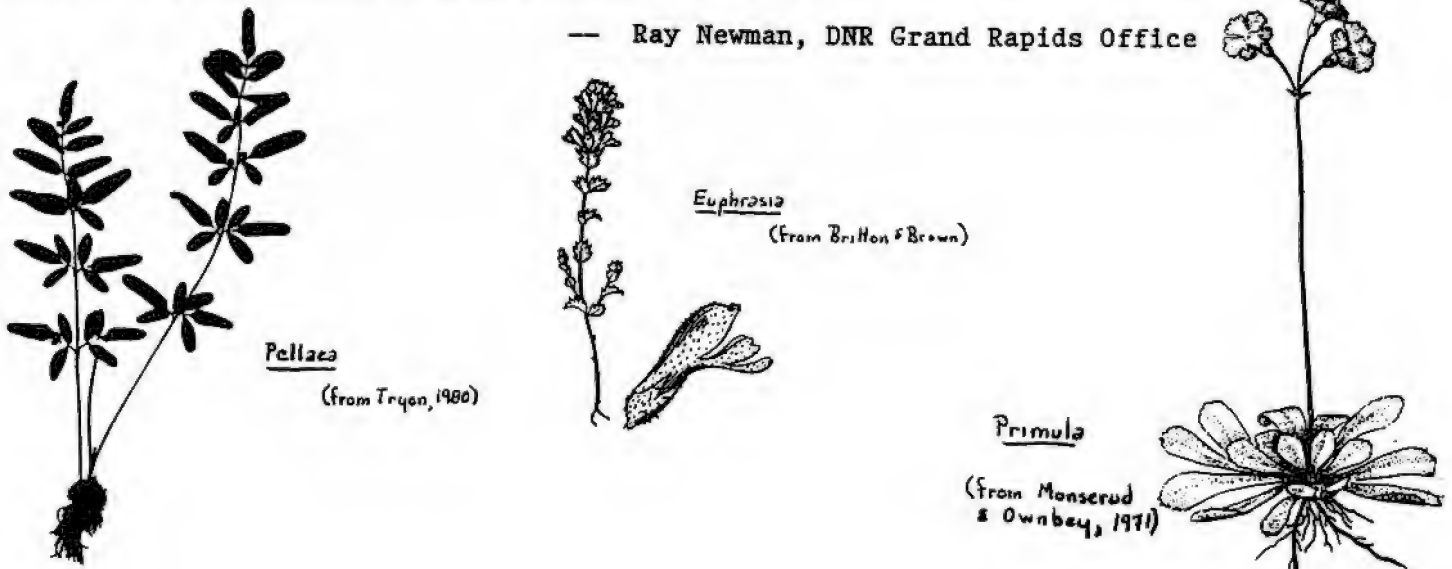
One particularly difficult site in Tettegouche is Shovel Point, a fragile, 1/4-mile-long peninsula into Lake Superior. This is an area of diminutive conifers, incredible lichen diversity, and a meeting of northern boreal with eastern deciduous floras. Here you can contemplate the presence of more species of the lichens Cladonia and Cladina than you ever thought possible. Here also, a careless footstep on a hot summer day can crush 50 years of lichen growth and leave a distinctly visible trail. Enough hikers and the lichen cover is destroyed, revealing the bare rock beneath; a situation that has already occurred on nearby Palisade Head.

Since Shovel Point was almost totally undisturbed, trail routes were carefully planned to miss shoreline colonies of the North Shore disjunct northern eyebright (Euphrasia hudsoniana, Scrophulariaceae) and butterwort (Pinguicula vulgaris, Lentibulariaceae) a more boreal and eastern species ~~that~~ is on the state "Special Concern" list. Other unusual plants which played a role in Shovel Point plans, include such northern elements as the matricary grape-fern (Botrychium matricariifolium, Ophioglossaceae) and the coral-roots (Corallorhiza spp., Orchidaceae). Plants with closer affinities to eastern floras include the doll's-eye or white baneberry (Actaea pachypoda, Ranunculaceae), whitlow-grass (Draba arabisans, Brassicaceae - also on the state "Special Concern" list), smooth cliff-brake (Pellaea glabella, Polypodiaceae), the New England violet (Viola novae-angliae, Violaceae - another "Special Concern" plant), and the birds-eye primrose (Primula mistassinica, Primulaceae - a species mostly limited to the St. Lawrence Seaway).

Smooth cliff-brake and whitlow-grass, which colonize the 160' cliffs on Shovel Point, are seemingly tucked securely out of man's reach. A new ecological threat looms on their horizon, however, in the form of rock climbers.

The best way to provide protection for rare plants is for the park managers to have a good grasp of the flora of an area. Unfortunately, a botanical inventory of the park has not yet been conducted, even though the remarkably varied habitats indicate good rare plant potential. Hopefully this can soon be rectified and any information on the flora will be welcomed by the park office from knowledgeable persons.

— Ray Newman, DNR Grand Rapids Office



CONSERVATION AND LEGISLATIVE CORNER *****

Endangered Species Act

The revised Endangered Species Act was passed by the U.S. House of Representative last December. The Senate must now be persuaded of the importance of swift action on this bill. The ESA Reauthorization Coordinating Committee anticipates difficulty in getting the Senate to act because of a heavy schedule and the objections of Senator Simpson (R-WY) to provisions protecting wolves and grizzlies. The plants, however, cannot wait. Please write your senators immediately, asking them to:

1. contact the appropriate Senate leaders (Democrats: Robert Byrd and Alan Cranston. Republicans: Bob Dole) and ask for scheduled floor debate as early as possible.
2. co-sponsor S.675 as reported from the Committee on Environment and Public Works and to work for its passage with no amendments.

-- Natural Resources Defense Council

"Swampbuster" law not being enforced

Historic legislation protecting the nation's wetlands is being "circumvented and in many cases wholly ignored in the north central U.S.," U.S. Senator Bob Kasten (R-WI) recently charged. Kasten, who led the effort to include the provision in the 1985 Farm Bill, pledged to fight efforts to weaken the federal "swampbuster" law. The swampbuster provisions of the 1985 Farm Bill denies farm program benefits to farmers who convert wetlands to cropland. Kasten criticized some officials of the U.S. Department of Agriculture for not enforcing "swampbuster" to protect prairie pothole wetlands in Great Plains states, particularly North Dakota. The farm bill also provided for the establishment of a "Conservation Reserve," a program to set aside millions of acres of farmlands for conservation purposes.

Encourage your U.S. senators and representatives to work for the enforcement of this important legislation.

-- Jim Sims

THE GARDENERS' CORNER *****

Caution urged bulb growers

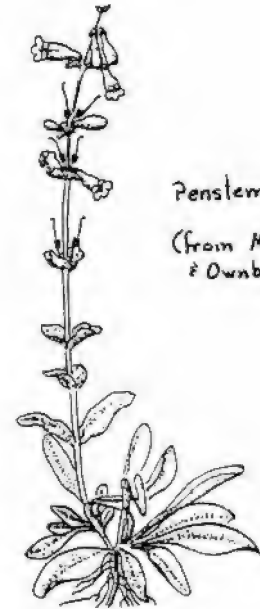
Americans plant over a billion bulbs each year. Most of these are hybrids produced in nurseries, especially by that amazing country, The Netherlands. If the flower that attract you have florid common names or are identified as hybrids, you should feel free to buy them. Furthermore, grape hyacinths, most crocus, and the alliums are usually propagated. However, please be careful about bulbs labelled as "wild," "species," or "botanicals," and many of the small, early-blooming types. These may have been collected from the wild in Turkey, Spain, South Africa, Central Asia, or even the United States. We suggest that you ask, "Did you propagate these bulbs in your nursery from seeds, offshoots, or tissue culture? If you obtained these bulbs from a supplier, do you know that the supplier propagated them?" Assurances that bulbs were obtained from "commercial sources" are not adequate, since the bulbs collected systematically in Turkey and other countries fit this description.

-- Natural Resources Defense Council

Tips for growing native showy wildflowers

The following data were gathered at the request of Dr. David Northington of the National Wildflower Research Center (Austin, Texas). Dr. Northington is gathering information on showy wildflowers suitable for planting from various states. The Minnesota information is also begin provided here for those interested in gardening with some of our natives.

NAME	FLOWERING SEASON	HEIGHT	COLOR	REMARKS
<i>Asarachne foeniculum</i> Fragrant giant hyssop	Summer	2-4'	Blue	
<i>Anemone canadensis</i> Canada anemone	Early summer	1-2'	White	Needs extra moisture
<i>Asclepias tuberosa</i> Butterfly plant	Summer	1-2'	Orange	
<i>Chamaecrista</i> (Cassia) <i>fasciculata</i> Partridge-pea	Summer-fall	1-3'	Yellow	Flowering prolonged by seed harvesting
<i>Echinacea angustifolia</i> Purple coneflower	Summer-fall	1-3'	Purple	
<i>Gentiana andrewsii</i> Closed gentian or bottle gentian	Fall	1-2'	Blue	Extra moisture or partial shade helpful; transplants work best
<i>Liatris pycnostachya</i> Tail blazing star	Summer-fall	3-4'	Lavender	
<i>Lobelia cardinalis</i> Cardinal flower	Summer	2-3'	Red	Extra moisture or partial shade helpful
<i>Mertensia virginica</i> Virginia bluebells	Early spring	1-2'	Blue	Extra moisture helpful; Dies down after flowering
<i>Monarda fistulosa</i> Wild bergamot	Summer	2-3'	Lavender	
<i>Penstemon scandiflorus</i> Large-flowered beard-tongue	Summer	2-3'	Pink; Lavender	Plant two years in succession
<i>Phlox pilosa</i> Downy phlox	Spring-early summer	1'	Pink	Flowering prolonged by seed harvesting
<i>Ratibida pinnata</i> Grey-headed coneflower	Summer	3-5'	Yellow	
<i>Solidago speciosa</i> Showy goldenrod	Summer-fall	2-3'	Yellow	
<i>Trillium grandiflorum</i> Large-flowered trillium	Spring	1'	White; Pink	Partial shade helpful; Slow to start from seed
<i>Utricularia grandiflora</i> Large-flowered bladderwort	Spring	1-2'	Yellow	Partial shade helpful



Penstemon

(from Monserud
& Ownbey, 1971)

Publications of Interest

Available from the Virginia Wildflower Preservation Society, Post Office Box 844, Annandale, Virginia 22003 . . .

Wildflower Conservation Guidelines, 1987, (send self-addressed envelope), free

Sources of Native Plants and Wildflowers, 1987, (send self-addressed envelope), free

Wild Orchids of the Middle Atlantic States, 1987, Gupton & Swope, hardcover, \$15.06

Growing and Propagating Wild Flowers, 1985, H. Phillips, Paperback, \$17.62

Available from Fundraising Chairman, Potowmack Chapter of the VWPS, Post Office Box 161, McLean, Virginia 22101 . . .

Growing Wildflowers: A Gardener's Guide, 1984, M. Sperka, paperback, \$12.02

Available from Prince William Wildflower Society, Book Orders, Post Office Box 83, Manassas, Virginia 22110 . . .

Growing Woodland Plants, 1972, ^{C & E}_A Birdseye, paperback, \$5.85

Other books of interest . . .

Directory of Resources on Wildflower Propagation, 1981, National Council of State Garden Clubs, Missouri Botanical Gardens, P.O. Box 299, St. Louis, Missouri 63110

UPCOMING EVENTS *****

- March 25-26 Minnesota Nature Photography Club is sponsoring the Interclub Showing at "Spring Break '88" (Hopkins High School). For more information contact Milan Sedio at 831-4630.
- April 2 Specialty Gardens Class: Woodland Gardens - at the University of Minnesota Arboretum, 9:30 - noon.^①
- April 11 Grand Canyon by Raft - slide presentation by Francis Breyette at the Nature Photography Club, 7:00 p.m., Central Community Center, Hwy. 7 and Wooddale, St. Louis Park.
- April 18 Learning Minnesota Wildflowers - at the University of Minnesota Arboretum, 10:00 a.m. - 3:00 p.m.^①
- April 22-23 Lake Superior Water Policy Conference - at the Duluth State Convention Center, 350 Harbor Drive. For more information contact: UMD Continuing Education, 213-726-8113.
- April 23 Ecology of the Cannon River - canoe trip sponsored by the Northwoods Audubon Center.^②
- April 30 Ecology of the Root River - canoe trip sponsored by the Northwoods Audubon Center.^②
- May 4 Wild Flower Walk - at the University of Minnesota Arboretum, 10:00 a.m. - noon.^①
- May 5 Wolfsfeld Woods SNA Exploration - sponsored by the Northwoods Audubon Center.^②
- May 7 Natural Lighting in Botanical Photography - workshop held by Rick Haug of the Nature Photography Club. For more information call 612-545-4626.
- May 14 Spring Plant Sale - at the University of Minnesota Arboretum.^①
- May 20-21 Adaptation and Evolution in Arid Areas - symposium sponsored by the Rancho Santa Ana Botanic Garden in Claremont, California. For information and registration materials call 714-625-8767.
- May 31 Exploration of Black Dog SNA and the Minnesota River Valley - sponsored by the Northwoods Audubon Center.^②
- June 1 Herb Walk at Wilder Forest - an emphasis on medicinal value of the native plants - sponsored by the Terrapin Folkschool, \$8 fee, 6:00 p.m. - 8:30 p.m.^③
- June 4 Medicinal Herb Workshop at Wilder Forest - emphasis on identification, storage, and preparation - sponsored by the Terrapin Folkschool, \$18 fee, 9:30 a.m. - 3:00 p.m.^③
- June 7-9 Tour England's Wildflowers and Gardens - a guided tour sponsored by the National Wildflower Center. Advance reservations recommended as the size of the tour is limited. For more information and reservations contact Wendy Wood, 512-929-3600.
- June 12 Wild Edibles Workshop at Wilder Forest - sponsored by the Terrapin Folkschool, \$10 fee.^③
- June 9-10 University of Minnesota Arboretum Anniversary Celebration - gala and picnic.^①

Upcoming Events Continued

- July 10-12 Apostle Islands Ecology - sailing expedition sponsored by the Northwoods
August 7-9 Audubon Center.^②
August 21-23
- July 24-30 Oregon Nature Conservancy Field Trip - a botany trip across Oregon that will include the newly established Columbia River Gorge Scenic Area, the Cascade Mountains, the high desert of central Oregon, Malheur National Wildlife Refuge, and spectacular Steens Mountain, an isolated mountain range in southwestern Oregon. Space is limited to nine participants. For details and reservations contact: Oregon Botany Expedition, The Nature Conservancy, 1205 N.W. 25th Avenue, Portland, Oregon 97210.
- August 7-11 11th North American Prairie Conference - at the University of Nebraska in Lincoln. For more information contact Dr. Thomas Bragg, 402-554-3378.
- August 16-17 Fen Forey in Fayette County, Iowa - sponsored by the Iowa Department of
August 23-24 Natural Resources, the objective is to locate high-quality examples of fens and associated rare plants (e.g., Gentianopsis crinita, G. procera, Parnassia glauca). For more information contact: Mark Leoschke, Bureau of Preserves and Ecological Services, Department of Natural Resources, Des Moines, Iowa 50319 or call 515-281-5145.
- Sept. 16-18 Bryological Foray at Black River Falls, Wisconsin - located on an ancient glacial lake bed adjacent to the Driftless Area of southwestern Wisconsin, the area is also rich in bryophytes of deciduous and coniferous forests as well as bryophytes specific to limestone or sandstone. For more information contact: John Christy, Botany Section, Milwaukee Public Museum, 800 West Wells Street, Milwaukee, Wisconsin 53233.
- November 2 1988 Minnesota Botany Exhibition - sponsored by the Nature Photography Club and MNPS. Time to start creating those award-winning color slides.

For information / reservations on some of the above-listed opportunities you may contact: ①: UM Arboretum - 612-443-2460
②: Northwoods Audubon Center - 612-245-2648 or -2525
③: Wilder Forest - 612-433-5198

OF SPECIAL NOTE *****

The Saint Paul Audubon Society offers scholarships to deserving youngsters who would like to attend summer programs at Northwoods Wilderness Youth Ecology Camps at Sandstone, Minnesota. This summer's schedule includes youth camps during 2-9 July; 9-16 July; and 19-26 July. For more information contact: Linda Amrein at 439-7670.

Research Expeditions

Looking for new excitement? Join a Research Expedition -- The University of California invites participation in several research projects, some examining Cost Rican wildlife, diving for South Pacific corals, or studying adaptations of tropical succulents in the Virgin Islands. Participants provide assistance in exchange for a chance to share the adventures with the experts. For information contact University Research Expedition Program, University of California, Box D-5, Berkeley, California 94720 or call 415-642-6586.

MNPS Board of Directors

Harriet Mason, President	(1990)
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Ruth Phipps, Treasurer	(1989)
Christine Soutter, Secretary	(1988)
Neil Anderson, Director-at-large	(1988)
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Jim Schuster, Director-at-large	(1988)
May Wright, Director-at-large	(1989)

Newsletter Staff

Anita Cholewa
Debbie Olmstead
Rose Meier

If you have a news item, article, or other information that should be included in the next issue of the Minnesota Plant Press, please send it to Anita Cholewa, Department of Botany, University of Minnesota, Saint Paul, Minnesota 55108.

Minnesota Plant Press may be obtained through membership in the Society.

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Saint Paul, Minnesota 55108



MINNESOTA PLANT PRESS

Vol. 7:3 supplement

NEWSLETTER OF THE MINNESOTA NATIVE PLANT SOCIETY

87/88

MANY, MANY THANKS to all the members (especially the students) who volunteered their time and energy to help make our first MNPS Symposium a rousing success! Many thanks also to Esther McLaughlin, who served tirelessly as Symposium Coordinator.

MANY, MANY THANKS also to Charlotte Menzel, our refreshments coordinator this year.

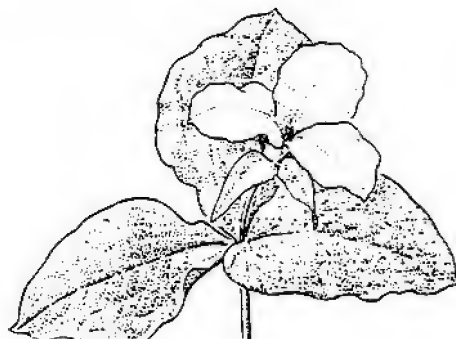
This special issue of the Minnesota Plant Press is designed to be a last reminder of the upcoming summer field trips. No additional notices will be sent.

SUMMER CAMP-OUT --- 24-26 June

The first annual MNPS summer camp-out will be held in the Aitkin area (about 3 hrs. driving time from the Cities) of central Minnesota, from Friday evening through Sunday afternoon. Several field trips are being planned: old cedar swamps, bogs, hardwood forest, and mushroom hunting; leaders will include Ms. Audrey Engels (area botanist) and Dr. David McLaughlin (UM-mycologist). Field trips will occur on Saturday morning and afternoon with time out for lunch. Additional exploring can take place Sunday morning. Bring plenty of mosquito dope!

A limited number of camping spaces (tent or hard-sided trailers) are available on the Engels' property; these are primitive conditions with outhouses, some electrical hookups, and a barn in case a rain shelter is needed. You will need to plan your own meals; at least one grill will be available and, of course, several restaurants can be found in Aitkin (about 25 mi. away) or McGregor (about 15 mi. away). For those of you who do not like to camp, motels are to be found in the Aitkin area. Call the Aitkin Chamber of Commerce (218-927-2316) for more information.

There is no fee for camping at the Engels' property, but preregistration is necessary, BEFORE 10 June. Call Anita Cholewa 612-625-0215 or Audrey Engels 218-845-2412. Maps and further details on the field trips will be mailed to registrants in June.



Large-flowered trillium
(*Trillium grandiflorum*)

from Monserud & Ownbey, 1971

SUMMER FIELD TRIPS

The following day trips have been arranged by MNPS for your enjoyment and education. Old clothes and sturdy walking shoes are the best attire. Ankle-high waterproof boots are suggested for the Savage Fen trip. Bring a bag lunch, field guides, and binoculars (some of the areas are also exceptional birding spots). Carpooling is encouraged. For further information or assistance with carpooling, call Robin Fox 612-642-9118.

Shattuck-St. Mary Nature Trail and River Bend Nature Center

Date: Saturday, 7 May, 1988

Time: 11:00 a.m. - 2:00 p.m.

Meeting Place: Huckleberry Inn in Faribault. From the Twin Cities take I-35W south to Faribault. Take the first exit and stop at Huckleberry Inn.

Leader: Mr. Orwin Rustad, biology teacher at Shattuck-St. Mary School.

Shattuck-St. Mary owns a small tract of deciduous hardwoods through which trails have been placed advantageously. Two spring gems to be found here are the Minnesota trout-lily and the showy orchis. River Bend Nature Center is nearby with similar vegetation.

James McKee Prairie*

Date: Saturday, 18 June

Time: 9:00 - 11:00 a.m.

Meeting Place: Maplewood Nature Center, 2659 East 7th Street in Maplewood.

There will be a brief introduction at the Nature Center before proceeding to the prairie, which is another 1.5 miles north.

Leader: Chris Soutter - former naturalist at Maplewood.

James McKee Prairie is an undisturbed remnant of wet-mesic prairie in Ramsey County. It is notable for its purity and diversity -- over 150 species of native plants occur on this three-acre site. The Prairie is owned by the City of Maplewood and managed by Maplewood Nature Center. Wear old shoes, long sleeves and pants, as this is a damp prairie.

*** Registration required - this trip will be limited to 25 participants in order to control impact on the prairie community. Call the Nature Center at 612-738-9383.

Strandness Prairie

Date: Saturday, 20 August

Time: 11:00 a.m. - 2:30 p.m.

Meeting Place: Canon Bowl Restaurant at the top of the hill in Glenwood.

From the Twin Cities take I-94 to Sauk Center, then go west on Hwy. 28 to Glenwood. Approximately 3-hour driving time. Carpooling encouraged.

Leader: Dr. Ellen Ordway - biology teacher at UM-Morris.

Strandness Prairie is a tallgrass prairie that has never been plowed or grazed. There are wet, mesic, and dry portions in the 37 acres, providing a feeling of the vastness of the original prairie. Two hundred plant species are known to occur. This is an excellent time to see many in bloom.

Savage Fen*

Date: Saturday, 27 August

Time: 10:00 a.m. - 1:00 p.m.

Meeting Place: Bay & Bay Transmission building parking lot. Take highway 13 west through Burnsville and Savage. At the stoplight, highway 13 makes a 90° turn to the south towards Prior Lake. Make the turn and follow highway 13 for 1/2 mile to 128th Street, which will be on the east (left) side. Follow 128th Street for about 1/3 mile turn south (right) before the deadend, to Bay & Bay Transmission.

Leader: Steve Eggers - wetland ecologist with the U.S. Army Corp of Engineers. Steve has also been inventorying and mapping the Savage Fen complex for several years.

At the base of 100-foot high bluffs of the Minnesota River Valley lies a 500-acre, sloping peat deposit. Cold, calcareous groundwater bubbles to the surface creating numerous springs and seepages. Calcium and magnesium salts, dissolved by the passage of the groundwater through dolomite bedrock, precipitate at the surface creating a harsh, alkaline soil condition. Only a select group of calcium-tolerant plants can survive these conditions - the calcareous fen community, the rarest of Minnesota's wetland types. We will be observing a 30-acre parcel recently designated as a Scientific and Natural Area. Five plant species listed as State Threatened in Minnesota and two on the Special Concern list have been documented within this parcel.

***Registration required - due to the sensitive nature of this plant community, participants will be limited to 16. Call Steve at 612-220-0371 (work).

OTHER FIELD TRIPS

(For more information on TNC-sponsored trips, call Julie Muehlberg at 612-379-2134.)

4 June - Bur Reed Bog and Wahoo Woods Federal RNA, sponsored by TNC.

Leader: Nancy Berlin, Public Affairs Specialist

Meeting Place: Perkins Restaurant in Grand Rapids

25 June - Schafer Prairie Preserve, sponsored by TNC.

Leader: Ed Cushing, UM Ecologist

Meeting Place: at the preserve, west of Glencoe

13 August - Minnesota Prairie Day

The DNR is sponsoring several trips on "Minnesota Prairie Day." For maps or more information, call the SNA Program at 612-296-3344 or write: SNA Program, Box 7, 500 Lafayette Rd., St. Paul, MN 55146.

The second annual Minnesota Prairie Day will honor a significant part of Minnesota's natural heritage: the native prairie that once covered more than one-third of the state. Less than 1% of the original 18 million acres remains today. Prairie Day was established to provide an opportunity for the public to view some of the finest remnants of native grasslands in the state and to learn about the special flora and fauna of these areas. The event is sponsored by the Scientific and Natural Areas Program, and features guided tours of selected sites throughout the prairie region of the state:

<u>Site</u>	<u>Nearest City</u>
Pembina Trail Preserve/ Crookston Prairie SNA	Crookston
Glacial Lake State Park	Glenwood
Prairie Coteau SNA	Pipestone
Iron Horse Prairie SNA	Hayfield
Helen Allison Savanna SNA	St. Paul

Tours will last from 1:00 - 4:00 p.m. at each site. Biologists with expertise in prairie natural history will be on hand to guide the tours, identify wildflowers and grasses, point out special prairie birds and other animals, and answer questions.

16-17; 23-24 August - Fen Foray in Fayette Co., Iowa, sponsored by the Iowa DNR

For more information contact: Mark Leoschke, Bureau of Preserves and Ecological Services, Department of Natural Resources, Des Moines, Iowa 50319 or call 515-281-5145.

20 August - Jeffers Petroglyphs and Red Rock Prairie

Leader: Nancy Sather, DNR Botanist

Meeting Place: Jeffers Cafe in Jeffers

27 August - Strandness Prairie and Staphinson Prairie

Leader: Ellen Ordway, UM-Morris Biologist

Meeting Place: Glenwood

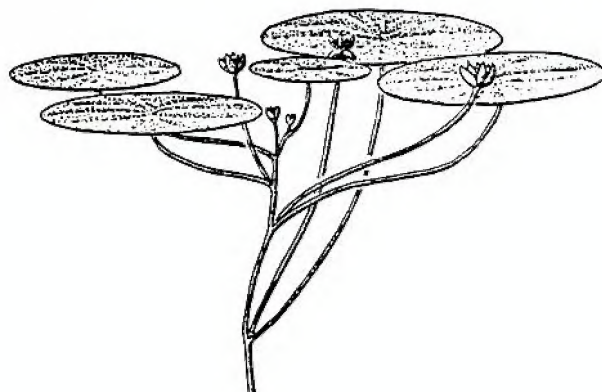
10 (or 17) September - Dedication of Savage Fen as a new Scientific and Natural Area

For more information, call Steve Eggers at 612-220-0371.

16-18 September - Bryological Foray at Black River Falls, Wisconsin, sponsored by the Milwaukee Public Museum. For more information, contact: John Christy, Botany Section, Milwaukee Public Museum, 800 West Wells Street, Milwaukee, Wisconsin 53233.

Water shield
(*Brasenia schreberi*)

From Mønterud & Ownbey, 1971.



RESEARCH EXPLORATIONS WITH THE UNIVERSITY OF MINNESOTA

Research Explorations, an exciting new research enhancement program offered through University of Minnesota Continuing Education and Extension, allows interested citizens to participate directly in University faculty field and lab research. Potential volunteers apply for a project of choice, depending on interest and expertise. Those selected contribute time, talent, and supplemental funding to cover the cost of their involvement in the research. As a donation to the University, contributions and travel to and from the project are tax deductible. Planning is underway to make graduate credit available for some 1988 opportunities. Projects often run from two to four weeks, though individual project needs vary, and while many projects occur in summer, some are held during other times of the year. Some of the projects include "Taking the 'wild' out of wild-rice," "Manitoba battles mistletoe," and "The impact of soil fertility on crop production." For more information and a program booklet listing 1988 projects, call 612-626-0214.

U.S. NATIONAL ARBORETUM NEEDS ASSISTANCE

The National Arboretum is attempting to correct the mistakes, omissions, and inadequacies of information found in garden books and plant reference guides. One area in which such incomplete or erroneous information has been published is plant hardiness. The Arboretum would like the help of volunteer observers in gathering new information. Two thousand species and cultivars are being evaluated. If you have grown, or are growing, woody or herbaceous plants and would like to become an "official observer," write:

Plant Performance Guide
National Herbarium
3501 New York Ave. NE
Washington, DC 20002

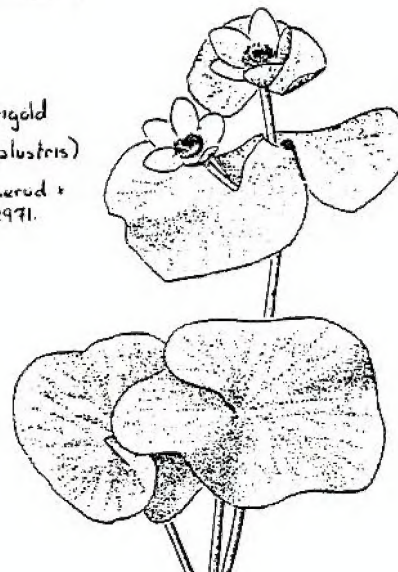
MNPS DIRECTORY

As requested by many of our members, we have enclosed our first attempt at a membership directory. It lists all currently paid members, so if you do not find your name, or if there are errors, please let us know.



Wild sarsaparilla
(*Aralia nudicaulis*)
From Monsrud &
Owenby, 1971

Marsh-marigold
(*Caltha palustris*)
From Monsrud &
Owenby, 1971.



MNPS VOLUNTEERS NEEDED

We are hoping to have a display in the DNR building at this year's State Fair, and volunteers will be needed to help staff it. If you are interested in helping, please call Robin Fox at 641-9118. MNPS may be able to subsidize your admission fees.

Volunteers are also needed to serve on various committees within our organization. This summer we will begin planning for next year's activities and could use some help from you. The amount of time you want to spend is entirely up to you but if you are interested in helping with any of the following committees, please call the appropriate committee chairman. Thanks!

Education & lectures (arranging monthly speakers or deciding on topics)	May Wright 612-429-7674
Conservation (involvement in state issues)	Harriet Mason 507-931-2225
Field trips (arranging leaders, places, carpooling)	Robin Fox 612-642-9118
Newsletter (helping with addressing, copying, etc.)	Nita Cholewa 612-488-5766 (eve.)
Membership (assisting with records and renewals)	Pat Leacock 612-647-1763 (eve.)
Publicity & welcoming (promotion of MNPS and arranging monthly refreshments)	Robin Fox 612-642-9118
Historian (assisting with MNPS records)	Chris Soutter 612-228-0306

NEW BOARD OF DIRECTORS

At our March Annual Meeting, new board members were elected by the membership and new officers were selected by the Board at the April business meeting. Effective September, 1988:

President: Dave McLaughlin	333-8806; 625-5736 (office)
Vice-president: May Wright	429-7674
Treasurer: Ruth Phipps	457-8908
Secretary: Welby Smith	297-0373
Director-at-large: Steve Eggers	894-0071
Director-at-large: Robin Fox	642-9118
Director-at-large: Harriet Mason	507-931-2225
Director-at-large: John Moriarty	
Director-at-large: Gerald Ownbey	436-5365



Cow parsnip
(*Heraclium maximum*)

From Munserud &
Ownbey, 1971

Hedge-bindweed
(*Convolvulus sepium*)

from Munserud &
Ownbey, 1971

